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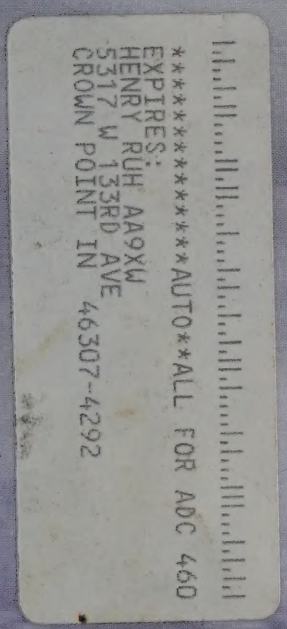

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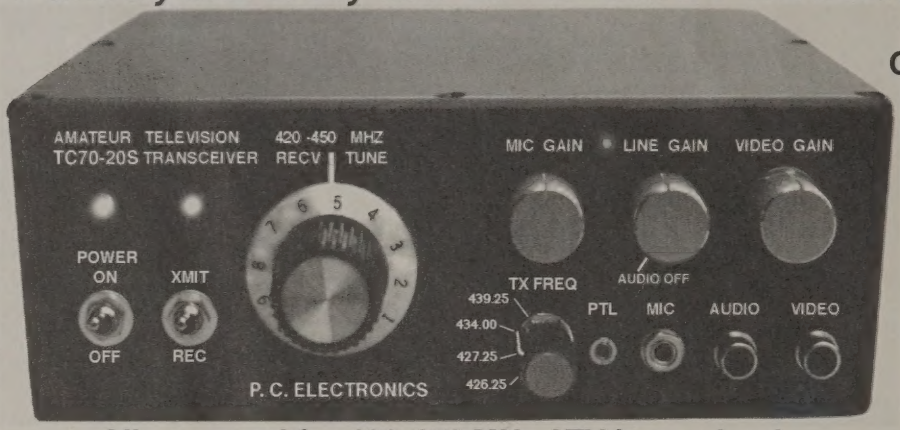

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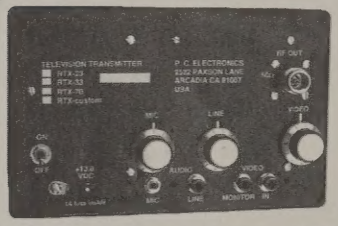

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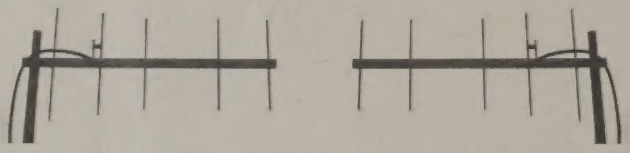

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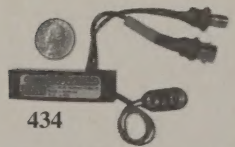

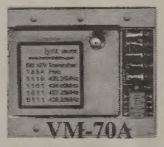

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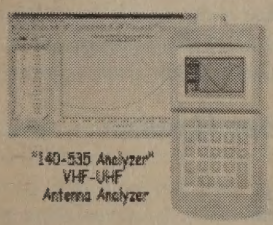

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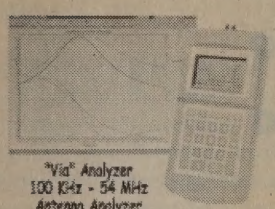

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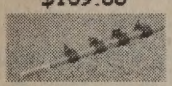

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Amateur Television Quarterly

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Adler Planetarium Balloon Launch

Finally a few minutes to sit down and report about the balloon launch on Saturday, August 19th, with Adler Planetarium & Astronomy Museum. I know this issue has a lot of balloon articles, but they are fun and do carry ATV sometimes. And it is fun - what a foxhunt!

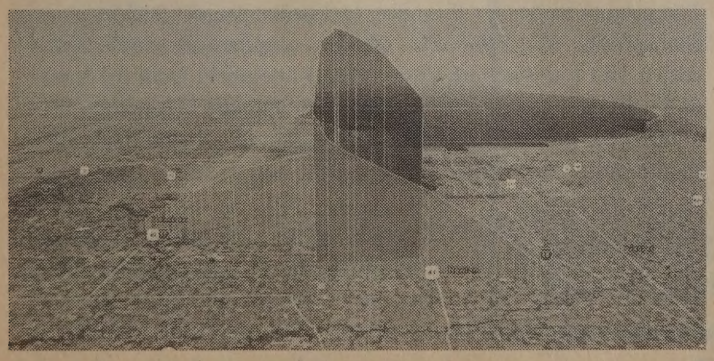
Rich, K9PK, and myself got up a 'little' early picking him up at 3 a.m. to head for Kankakee, IL. It turns out that the directions to get to the grass strip airport were not exactly right and we were glad they gave us the latitude and longitude as that is what got us there. Everyone started arriving around 7 am. A couple of special balloonatics that were there to help were Bill Brown, WB8ELK, from Huntsville, AL, but currently working in Indiana, and Paul Verhage, KD4STH, who drove all the way from Idaho for this event. And we had several people from Adler Planetarium, hosts for the event.

This was a small airport, not the Kankakee main airport, and we were treated first class. They opened the main hanger so the balloon could be inflated and not damaged from the 10 mph wind. Everyone that had a package to go up on the balloon started inspecting their stuff and turning things on. Some of the items on the packages were: a video camera recording over two hours while pointing straight up at the balloon, two APRS trackers with GPS, a still digital camera triggered with a 555 timer IC every minute while pointed out the side of a Styrofoam box, and on the bottom was a small 100 mw transmitter usually used for foxhunts that had a voice message every 20 seconds.

At the last minute it was decided to add a zip-locked bag, partially inflated, the experiment to see if it would pop the zipper of the bag as it went up. I placed a one dollar bill with my callsign on it in the bag. My experiment was to see *if the altitude would cause my one dollar to inflate!*

There were youngsters on hand so each package going up was held by one of the kids. The balloon was inflated to about 8-9 feet for liftoff. The packages weighed about 11-12 pounds and they inflated until they had a little over 15 pounds of lift. There was cloud cover at about 1000-1500 feet so when it was released, it disappeared rather quickly. Packets were received for a few minutes after launch enough to determine that the package was rising at about 1200 feet per minute.

Well, we stopped receiving packets very shortly after liftoff, from BOTH trackers! Wow, how will we find the package when it comes down? Well, we just kept driving, a caravan of 6 vehicles, heading the direction that the prediction said it would go. Let's hope that the prediction is correct. However, I had in my vehicle the ultimate weapon for finding the balloon, Rich, K9PK. Rich loves to foxhunt and has come in first many a time. And, remember that part of what went up was a 100 mw voice transmitter talking every 20 seconds. And, we could hear that transmitter pretty much the whole flight "if" Rich held his handheld out the window.



When we got close to I-65 where it was predicted to come down, cars went different directions to try and triangulate. We turned off first and headed North for a couple of miles before stopping and seeing what we could hear. Now I have to tell you about the second secret weapon that we had. Rich brought a VK3YNG Foxhunt Sniffer (**http://users.bigpond.net.au/vk3yng/foxhunt/2m_sniffer/manual.htm**). This device does not use an "S" meter but puts out a tone instead. The higher the tone the more you are pointing at the signal. It said it was still North of us so off we went again. This time when we stopped it was still coming from the West, - wait where did it go, it is right over our heads. Off to chase a little more to the East.

It seemed to land in a bean field, but could not be seen. By this time the other cars were all coming to the same area. Rich and a few others using directional antennas headed into the field after getting permission from the owners. Rich was the first one to spot the parachute and get to the payload. His VK3YNG Foxhunt Sniffer paid off big time.

Well, then there is the *REST OF THE STORY*..... After everyone was back on the road, Rich discovered that he had lost his handitalkie somewhere in the bean field. Now this was a **BIG** bean field, *really big*. Rich was almost ready to make up his mind as to what he was going to purchase as a replacement when we decided to try, at least, to see if it could be found. So, somewhere in a hundred acres or more of beans was this radio. The last we knew it was on 147.420 MHz listening to the 100 mw voice signal. But where did he and all the others walk in? We walked back and took a guess. From the edge of the field, I did Morse code on DTMF with my handitalkie hoping that Rich might hear his. After he was in maybe 300 feet I hear this yell saying that he heard it. After a little more DTMF Morse code, he held it up! So, two foxhunts in one day, both won by Rich.

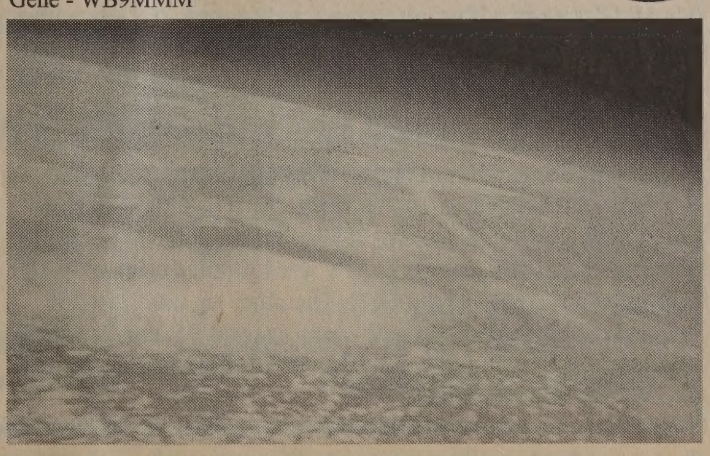
Oh, ya - remember the one dollar bill that I put in the Zip-Lock bag? Well, there was my bill back plus a second one dollar bill also inside the bag. No one would admit to putting the second dollar in there, so I guess that *altitude does cause money to inflate in value!* We scientifically proved it, right?

At this time it was close to 1 p.m. and we were all hungry. We drove to Rensselaer, IN and overwhelmed at pizza joint that was not expecting 18 people at 1:30 in the afternoon. There we recapped all that went on, watched video, seeing the balloon explode and the landing, and started the trip home around 3:30 p.m.

We had a great time and I hope that more will go for the fun next time. Maybe we can have a launch in our area some day. Just have to keep it out of the Chicago area and or Lake Michigan. Two pictures - One from about 88,000 feet and a 3D Google map of the route it took.

Gene - WB9MMM

ATVQ



Microwave ATV... a New approach for MUD 2006

By: John Jaminet - W3HMS Email: W3HMS@aol.com
912 Robert Ave.
Mechanicsburg, PA 17055

Background Amateur Television (ATV) has, since its inception in the 1950s, used the 420-450 MHz band for both simplex and in-band AM TV repeaters. This was necessary in the early days as little equipment operated well above 2 meters and reception was often made using converted UHF TV tuners with poor sensitivity The pictures were often marginal with rolling, without color and without sub-carrier sound. Those close to repeaters will argue differently but in the fringe area where I found myself, the best pictures were rather pathetic by the commercial color and sound standards of the day. Sound was often transmitted on 2 meters which did offer two way discussion of the picture on the screen. Sub-carrier sound as the broadcasters did it was the exception rather than the rule and sound-on-carrier required an additional receiver. The transmitters classically used crystal signals doubled and tripled to the output frequency, often 439.25 MHz, using cathode AM modulation.

A Visit to Switzerland

In the Fall of 1997, I found myself at the QTH of Michel, HB9AFO, near Lausanne. During one evening in his station, I had the pleasure to see a rock solid 1255 MHz FM ATV picture at 18 miles between Switzerland and France. It was great, like a painting on the wall, except for the plume of smoke from his pipe coming across Lake Geneva in France! This was the day that I knew there must be a better way and there is! It is FM and the microwave bands. Another reason I visited HB9AFO was to see his world class 10 GHz ATV equipment. He and his partner then held the world DX record at about 410 miles. I was impressed by the use he and colleagues made of KU band satellite components such as LNBs and antennas. Indeed, F6IWF had developed a modification for a popular LNB that brought all the power of engineering and production for a mass produced item which gave hams a super performing LNB for relatively low cost. The same was true for 60 cm and larger off set dishes.

My 10 Ghz work: I had always wanted to work 10 GHz with a Gunnplexor in sound and in video. So I obtained an LNA from F6IWF and 2 LNAs with 9 GHz oscillators from the UK. These were put into service with hamfest grade US style satellite receivers which tune 950-1450 MHz and 18 inch offset dishes using feeds designed from the W1GHZ HDL.ant PC program. For video transmitted on 10,300 MHz, the IF is 1300 MHz. I ran periodic tests with Joe, WA3PTV, and we gradually extended our personal DX records in ATV to 51.6 miles using only 10 milliwatts on one leg of the QSO. The other leg used just 250 mw and a 24 inch dish. In both cases, we had P5, that is, broadcast level pictures in full color. Our 10 GHz efforts then turned to CW/SSB and contesting.

FM vs. AM Video Modulation

With respect to modulation, FM offers considerable advantages over AM with respect to picture quality just as it does for audio quality when compared to AM particularly in a fine music environment. To me this is clearly evident in the snow-free pictures received with a signal level of AM P3 which appears as P5+ in FM.

Microwave ATV

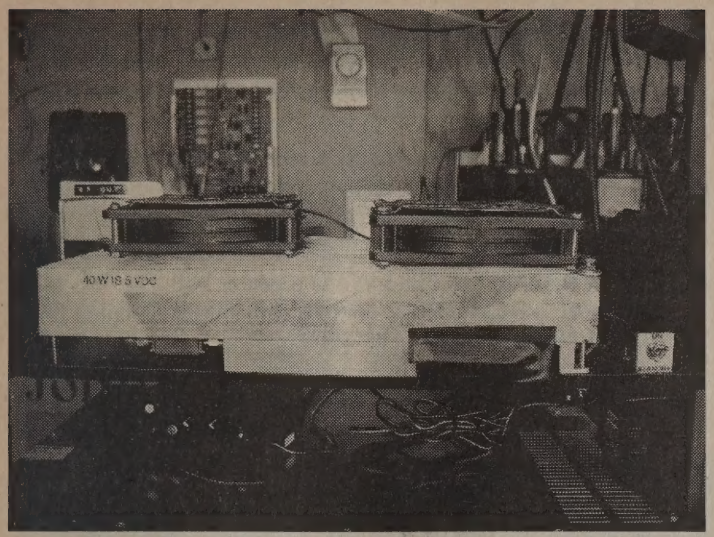
For an ATV repeater, the 9 cm band at 3300-3500 MHz offers the possibility to use modern, high quality components designed for the mass market without modification for transmitting commercial grade pictures in FM. Additionally, this band has no competition from data communication or other unlicensed devices to the best of our knowledge. With an input on another band, the user can see his own pictures At the same quality level as other viewers see it. In addition, the use of 2200 MHz separation permits the LNB and the transmitting antenna to be close on the same station tower with out QRM and it eliminates filters at the repeater and at QTH stations. Filters, hams have found, are always costly, bulky, and difficult to tune and, it seems, become untuned from time to time. Thus the absence of filters is a real "plus."

SMRA Microwave ATV Repeater

In the Carlisle/Harrisburg, PA area, we are now operating a dual-band repeater using 1280 MHz FM input and 3480 MHz FM output. We are currently repeating NASA shuttle audio and video when no signals are in the 1280 MHz receiver. Local reception provides an outstanding full color snow free picture. In fact, our DX record is 63 miles with this kind of picture. It is perfectly legal to rebroadcast NASA video which most viewers receive with a 24 inch dish, Dishnet type LNB, and a Free to Air MPEG-2 Traxis DBS-2800 receiver purchased on the Internet. The beacon/repeater is on full time, that is 24 hours per day 7 days per week for months at a time between shutdowns!

The project leader for this most ambitious project is Gary Blacksmith, MD, WA3CPO, who has obtained an excellent site with a 100 ft tower and 7/8 inch hard line cable from the transmitter to the antenna. Our transmitting antenna is a vertically polarized omni on 3480 MHz with a gain of 11 dbd made by Stella-Dorus in Ireland.

We are using a commercial grade exciter with one milliwatt output to the Toshiba 40 watt amplifier. This exciter is very small, about the size of a commemorative postage stamp, but its performance characteristics are superb. The amplifiers, which



Toshiba 40 watt, 3420 MHz amplifier

need only one mw of drive, are often used by 9 cm weak signal operators of which I am one. The transmission antenna is either a panel antenna with about 135 degree coverage or a commercially made omni with 11 dbd gain. We use vertical polarization on both reception and transmission as omni-directional antennas for this polarization are more readily available than horizontal antennas. To improve the picture quality of all input signals, we use a Time Base Corrector, a model AVT-8710. The video/audio controller is the model ATVC-4 Plus by Intuitive Circuits.

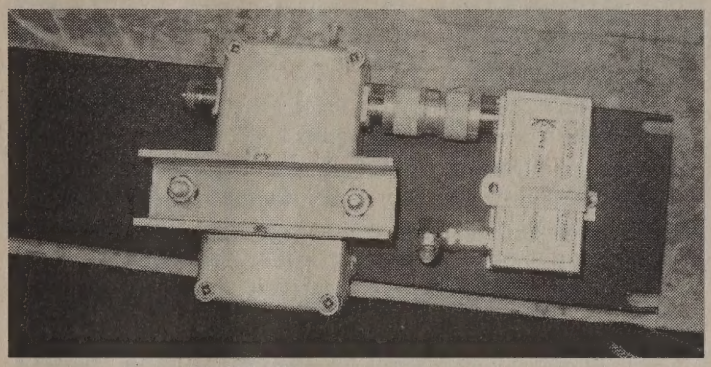
Sound

The sound input to the repeater on 1280 MHz is 5.5 MHz. The sound output on 3480 MHz is 6.8 MHz. Both frequencies are quite common in the satellite TV world.

Toshiba 40 Watt Amplifiers

We have found that these Toshiba 40 watt amps get VERY HOT in the summer months in 24/7 usage and they require a LARGE heat sink with the fins pointing up. By large, we mean about 2.5 times the surface area of the amp. This large heat sink is cooled by two 5 inch across blowers in parallel so if one fails the other will continue. In addition, we have installed thermometers designed for indoor and outdoor use on the amps with the outside probe mounted on the hottest part of the heat sink. The summer temperature difference between chassis and the hottest part of the heat sink is often 20-30 degrees F. Since this rework, we have had excellent service for the primary White Rock repeater and the new 3420 MHz beacon mounted at the WITF-TV Channel 33 site north of Harrisburg both of which transmit NASA 24/7. A detailed check list for putting this Toshiba amp on the air in ATV, CW, and SSB service has been developed by me dated Jan 6, 2006. It will be sent to anyone sending an email to me at W3HMS@aol.com and asking for it.

Reception of the input signal on 1280 MHz: The receiving antenna is a Comet Model GP-21 of 14.9 dbi gain at 100 ft feeding a filter that heavily attenuates below 1240 MHz for elimination of cell phone and paging QRM. It was designed, built and donated to us by Founder/Owner Jerry Buckwalter of Alpha Components of Mechanicsburg, PA. The preamp is a Kuhne Electronics (DB6NT) LNA Model MKU 132A feeding a Holland model HR 120 satellite receiver with audio and video outputs to the controller.



1280 filter and preamp

Reception on 3480 MHz: LNBs for Reception on 3420 or 3480 MHz reception are standard, out-of-the-box, C band satellite LNB that cover 3700-4200 MHz but will also work just fine on 3480 MHz when followed by a satellite receiver tuned as an IF to 1670 MHz. For 3420 MHz, it is a 1730 MHz IF. American style satellite receivers do not cover 1670 MHz but European receivers do cover to at least 1750 MHz and most to 2150 MHz. The latest C band LNB we have found is actually an LNBF (LNB with feed) made by DMS International which covers 3400-4200 MHz. It has an incredible 13 degree Kelvin noise factor and it comes complete with a scalar ring feed and two LNAs, one for vertical and the other for horizontal polarization. In commercial service, the satellite receiver selects between these amplifiers by use of +18 VDC or +13 VDC. In amateur service, we just mount them for vertical polarization with +18 VDC on the line and orient for best picture. We buy these LNBFs in the below 30 dollar range on the Internet. Google On 'DMS International.'

For 3480 MHz reception, we have found that the best reception is obtained with a C-band LNBF, on a 24 inch offset dish now

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Gaithersburg, MD 20877

available at about $30. For regular LNBs, a feed horn, designed by Paul Wade's program HDL2000, also on a 24 inch offset dish works quite well. We use vertical polarization on both reception and transmission as omni-directional antennas for this polarization are more readily available than horizontal antennas.

Now a weak signal operator could well ask if these LNAs could be converted for 3456 MHz use. We haven't tried it but I have opened up an LNB and observed the two probes and the two LNAs. So at about $10 per LNA, experimentation should not "break your bank", HI!

The cable TV operators around the US are replacing analog satellite receivers with digital receivers. As these analog receivers do not contain any circuitry for frequency or orientation memorization, there is no market for them except for ATVers. Thus the companies that buy all the equipment at a satellite site are quite happy to sell at a very low price or give them to ATVers as their option is to pay the "crushers" to haul them away.

We have found several Blonder -Tongue, PICO, and Holland satellite receivers to offer excellent pictures and they cover at least 950-1750 MHz. The Scientific Atlanta model 9660 is an excellent performer BUT the video must be inverted. We have perfected a low- cost, easy to scratch-build circuit. The models which we did find to work well are as follows although we did NOT test all satellite receivers:

Blonder -Tongue model BT-6166 and model 6185A….not 6185!

PICO model PR- 4200

Holland Model HR-120

Scientific Atlanta model 9660

WA3CPO has found sources for ex-commercial satellite system analog receivers and he has obtained limited supplies to sell to members of the SMRA radio club, our supporting club. These receivers are excellent in all aspects and they require no conversion. Some stations (me for instance) like to add an AC Power Switch, LED, and front panel audio and video RCA jacks.

If you can find one, a European analog Pansat (Microtek) receiver at about $130), which works on 117 VAC, is an excellent performer. These and other models are often found on Ebay in the under $50 range.

Internet To The Buying Rescue

Judicious use of the Internet in equipment searching has unearthed some incredible equipment buys, low-noise LNBs, dual polarization 13 degree Kelvin LNBFs in the $20 range, 24 inch steel offset satellite dishes in the $30 range, and ex-cable TV commercial grade satellite receivers under $100 and in some occasions free, as we saved the seller the labor in getting the receivers to the "crushers"!!

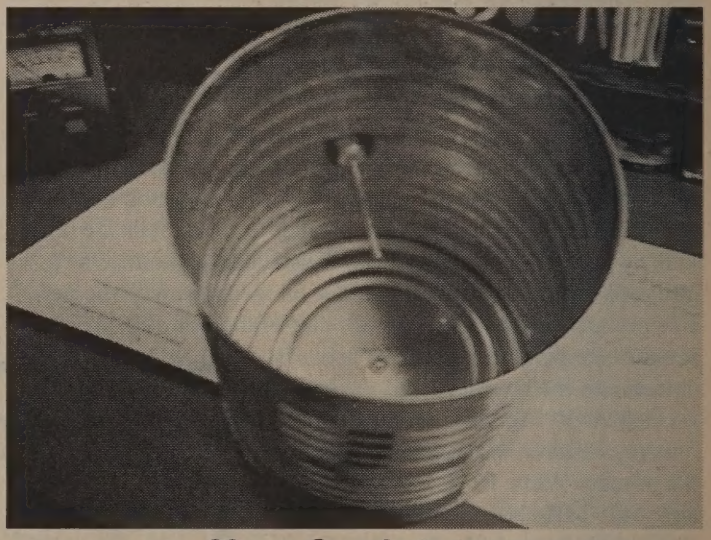
10 GHz Repeater Linking

The use of 10 GHz for ATV is by no means dead. Indeed, we have purchased the excellent 1 watt DRO ATV transmitter made by Kuhne Electronics (DB6NT) in Germany. The transmitter is sold with the understanding that a baseband unit is required for operation with proper video, sound, and color. We have been attempting to obtain an RSE BBA unit from Belgium with no luck despite a 3 month effort! We envision mounting the power supply and BBA unit in a rack in the repeater building. We plan to run two RG-6 cables to the 10 GHz transmitter mounted on the arm of a 24 inch offset dish. The feed was converted from an inexpensive ($20 class) Ku band LNB. It will operate on 10.4 GHz. The receiving capability will also use a 24 inch offset with a "Bob Platts" 9 GHz LO LNB from the UK feeding a US satellite receiver at 1400 MHz..

We will use this to link two repeater sites over distances of about 60 miles with broadcast level quality video, sound, and color.

1280 MHz FM Transmission into the Repeater

For 1280 MHz transmission, our tests have confirmed that the Videolynx Z23B with 2 watts output produces broadcast quality video as may other units in the market place, if you can find them! The sound deviation from this transmitter is much less than the 200 KHz needed for a satellite TV receiver but the designer/builder has developed a solution. This transmitter needs line level audio input, not microphone level, and 1 V p-p video input. A common camcorder is useful with a modified Z23B transmitter.

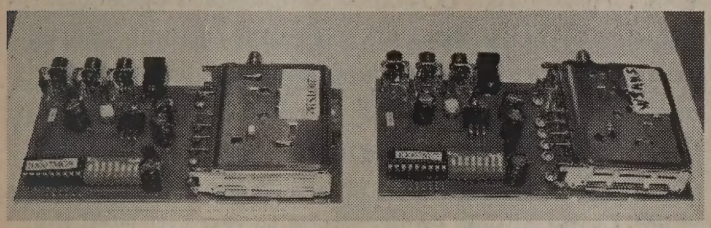


23 cm Can Antenna

We envision that stations close to the repeater can use a neat little #10 food can antenna with probe on 1280 MHz as employed by F4DAY at his QTH and others in the USA. I am using this antenna at my QTH with 30 watts in the station and low loss LMR coax to the can antenna. Other stations can use higher gain antennas based on signal needs/distance. For additional power, several of us use the 30 watt DEMI linear amplifier which is

equipped with a large heat sink. It is ideal for long transmissions and I find that I have often transmitted for 30-40 minutes without generating excess heat. It needs only about 20 milliwatts of drive.

We have recently tested the WIMO (Germany) 23 cm ATV-Sender 50 mw output FM ATV transmitter and the TVHAM.com 23 cm transmitter with 50 mw output sold in the UK and available on the same Web site. It seems to have the same appearance and specs save for the frequency range, the settings, and the key IC. Both units offer much promise and are low cost at $70-102. Both units will accept camcorder video and audio output and fully modulate the carrier as viewed on a TV set and a waveform monitor.



MOBIL COM **WIMO**

The Videolynx Z23B with 2 watts output does offer slightly better video. The sound sub- carrier is not fully modulated for proper recovery of the sound in a satellite receiver of the types cited above without a conversion developed by the designer/builder. Regrettably, it has been extremely difficult, over many months, to obtain replies to communications about conversions from the designer/builder. Thus, we have chosen to search for other transmitters particularly when the cost can be reduced as is the case with the WIMO and TVHAM models. We have not yet finished our testing on these two rigs in terms of the sound conversion to 5.5 MHz and their ability to access the repeater with an amplifier of at least 2 watts in the circuit.

Repeater Inputs

We have expanded reception to include linking of two other local repeaters into our controller. Our inputs in priority sequence are:

#1 is 1280 MHz FM repeater input

#2 is York 439.25 MHz AM repeater input

#3 to be York 23 cm FM video input or Baltimore 23 cm/9 cm input.

#4 is NASA video input

#5 is a local tone select camera

This linking has permitted the accomplishment of a long-standing local goal, that of actual ATV linking among the users of two repeaters to exchange very high quality P5 color pictures. We know that, far above normal ham use, this ATV capability could well serve local emergency organizations.

WR 3480 screen September 2006

Lightning Protection

One could ask the question: does a 100 ft tower on the top of a large hill attract lightning? At least twice, we have suffered damage this way. As such, we have installed Polyphaser units at each end of transmit and receive cables. Several receiving stations have installed the JVF Surchargers for use on RG-6 cables between the LNB and the satellite receiver.

Accomplishing a long-term complex project: We have found that you need the following to accomplish a long- term complex project.

1. Motivation
2. Money
3. Repeater Site
4. Technical skills.
5. Time

And of these, motivation seems to be the most critical. With it, the others it seems can be found. Without it, the others are never in reach; only excuses are found!

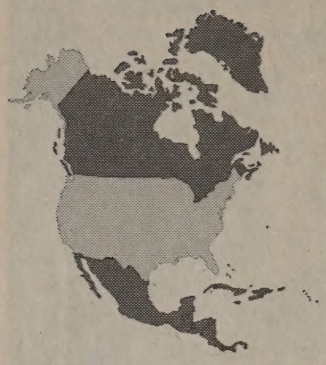
Future projects. We see these: (1) the development of a video inverter PCB and kit to make available to about 45 buyers of the Scientific Atlanta Model 9660 satellite receiver, (2) the ability to receive and retransmit the 3480 MHz signal while simultaneously transmitting the picture on 3420 MHz, (3) the installation of the 10 GHz link, and the conversion of our 3420 MHz beacon to a fully functioning repeater.

For further information, please contact John Jaminet, W3HMS, at **W3HMS@aol.com.**

ATVQ

North American ATV DX Report

By: Bob Delaney - KA9UVY - Email KA9UVY@hotmail.com
10630 N. Delaney Lane
Mt. Vernon, IL 62864
DX Hotline 618-242-7063



Well the contest has come and gone again this summer and the bands are about to go into their long winter sleep. This time of year is not prone to the everyday enhancements that summer brings but it is known to produce some of the legendary openings we have all read about. The big one of 1985 Thanksgiving, The super tropo of Christmas 1994. The real long haul 3 day openings can and do come without warning and at any time of year. The weather is always the key in the Troposphere and obviously the weather is changing so don't put the gear away just yet!

When the bands open up the key to success will be knowing who to look for and making sure the word gets out so we can all participate. I started a project about 2 years ago. It seemed simple, put together a list of active DX operators and some of their information so that we could have another tool to use in the event of the next BIG ONE. I asked that anyone wanting to be on the list send me some specific data, some did and many did not. In fact the list seemed so small I kind of was embarrassed to print it! Well the time has come to show the cards! I will however let it be known that there are several stations that are active and on the air working DX in the Midwest that I work many times a year that did not submit their information. That being said this is what I have now:

Obviously this list needs to be revised and maybe now that it is out there more will join in. If you are

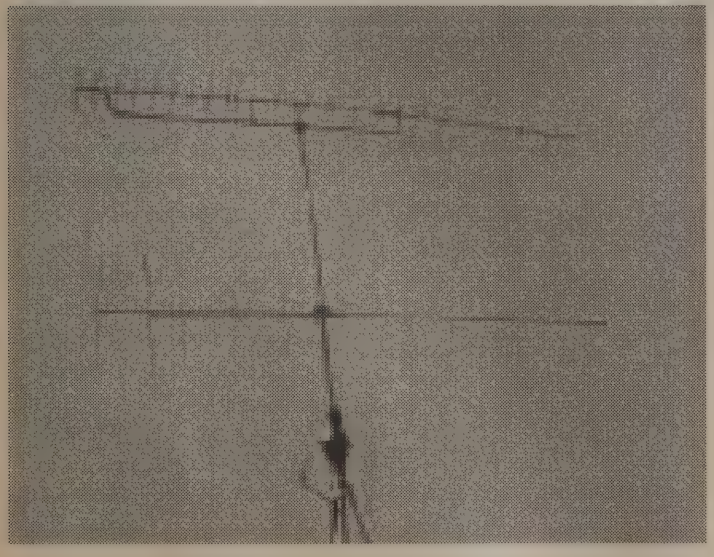
DXER'S

ST	CALL	NAME	CITY/TOWN	GRID	BND/PWR	POL	TLKBK	PHONE	EMAIL
AR	N0ALJ	MIKE	ROGERS	EM26XH	70 / 50 PEP	V		479-621-9449	MLSCHRO@COX-INTERNET.COM
IL	AA9MY	BOB	PEKIN	EN50FM	70 / 55 AVG	H	144.34		AA9MY@ARRL.NET
IL	KA9UVY	BOB	MT. VERNON	EM58NG	70 / 125 AVG	H	144.34	618-242-7063	KA9UVY@HOTMAIL.COM
IL	KA9UVY	BOB	MT. VERNON	EM58NG	33FM / 60 AVG	H	144.34	618-242-7063	KA9UVY@HOTMAIL.COM
IL	KA9UVY	BOB	MT. VERNON	EM58NG	23FM / 22 AVG	H	144.34	618-242-7063	KA9UVY@HOTMAIL.COM
IL	KB9CJR	TONY	BOLINGBROOK	EN61AQ	70 / 150 AVG	H	144.34		RTONYGROSS@AOL.COM
IL	KB9WLM	LARRY	CANTON	EN40XN	70 / 250 AVG	H	144.34		KB9WLM@USAIRWAVE.COM
IL	K9SM	SCOTT	LITCHFIELD	EM59EE	70 / 100 AVG	H	144.34	217-324-2412	SMILLICK@WAMUSA.COM
IL	K9SM	SCOTT	LITCHFIELD	EM59EE	33AM / 40 AVG	H	144.34	217-324-2412	SMILLICK@WAMUSA.COM
IL	K9SM	SCOTT	LITCHFIELD	EM59EE	23FM / 70 AVG	H	144.34	217-324-2412	SMILLICK@WAMUSA.COM
IL	N9XHU	LEONARD	SPRINGFIELD	EM59ET	70 / 100 AVG	H	144.34		MCWHORTERA@INSIGHTBB.COM
IL	WD9IVD	DALLAS	EDWARDSVILLE	EM58BV	70 / 50 AVG	H	144.34	618-692-6860	WD9IVD@ARRL.NET
KS	KC0HFL	BOB	WICHITA	EM17IO	70 / 200 AVG	H	144.34	316-529-4907	KC0HFL@COX.NET
KY	W4HTB	HANK	BOWLING GREEN	EM66TX	70 / 65 AVG	H	144.34	270-793-4822	W4HTB@INSIGHTBB.COM
MD	N3DC	BILL	CHEVERLY	FM18NV	70 / 20 PEP	H		301-772-7382	VIVERETT@SMART.NET
MI	KC8LMI	BRYAN	PLEASANT LAKE	EN72UJ	70 / 200 AVG	H	144.34	517-769-2878	KC8LMI@TRITON.NET
MN	WD0AKX	LARRY	ALBERT LEA	EN33HP	70 / 50 AVG	H	144.34	507-402-0364	SHAUNCE@DESKMEDIA.COM
MO	KA0MR	BOB	LIBERTY	EM29SG	70 / 50 AVG	H/V			KA0MR@ARRL.NET
MO	KD0LO	JOHN	WILDWOOD	EM48PN	70 / 100 AVG	H	144.34	636-458-1545	JSPAETH@HUGHES.NET
MO	KD0LO	JOHN	WILDWOOD	EM48PN	23FM / 100 AVG	H	144.34	636-458-1545	JSPAETH@HUGHES.NET
MO	KD0LO	JOHN	WILDWOOD	EM48PN	33FM / 100AVG	H	144.34	636-458-1545	JSPAETH@HUGHES.NET
MO	KO0Z	RON	ST. PETERS	EM48QS	70 / 100 AVG	H	144.34		RONOCHU@CHARTER.NET
MO	KO0Z	RON	ST. PETERS	EM48QS	23 FM / 400ERP	H	144.34		RONOCHU@CHARTER.NET
NY	N2UXI	RON	BROOKLYN	FN30	70 / 80 AVG	H	144.34	845-313-2108	N2UXI@ATT.NET
OH	WU8O	TOM	PLAIN CITY	EN80IC	70 / 275 AVG	H	144.34	614-733-0722	TWALKER@EMEC.US
OH	WU8O	TOM	PLAIN CITY	EN80IC	23FM / 26 AVG	V	144.34	614-733-0722	TWALKER@EMEC.US
OH	WU8O	TOM	PLAIN CITY	EN80IC	13FM / 100 AVG	V	144.34	614-733-0722	TWALKER@EMEC.US
OK	K9KK	RICK	NORMAN	EM15EN	70 / 300 AVG	H	144.34		K9KK@EARTHLINK.NET
TX	WA5ETK	GENE	AMARILLO	DM95CF	70 / 10W PEP	V		806-670-6452	WA5ETK@COX.NET
VA	W4SW	BERNIE	VIENNA	FM18IW	70 / 2KW ERP	H		703-281-9582	W4SW@ARRL.NET

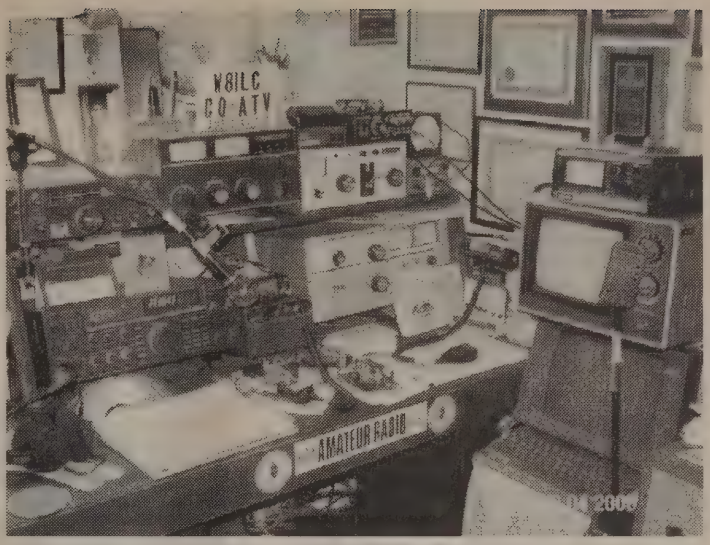
on the list and wish to revise your specs please e-mail or call me or write so that corrections can be made. If certain station information is not shown or wrong please feel free to correct me. An updated list will be available by request. A big thanks to Shannon, KC9BIE, for helping with the spreadsheet and sorting out 2 years worth of e-mails etc. If you use this list to get in contact with someone or if you are on the list and someone contacts you for a sked please drop me a line and let me know.

Meet the DXer:

Something else I thought I would try to do is recognize some of the operators that have been on the air and working hard at this mode. This time I thought I would look at a newcomer to this mode (about a year) Ron, W8ILC out of Dayton Ohio. Ron is on the air almost every morning and quite frequently available on the ATV Activity logger via the web and on 144.340. Ron has a background in HF DXing with 367 countries, 312 mobile and VHF DXing 25 states on 2 meter AM/CW in the 60's and 70's. Ron is no stranger to on the air effort and is now trying his hand at The Ultimate Challenge ATV DXing! Rons station currently is a P C Electronics TC 70-20s barefoot into an 88 element JayBeam (remember those) at only 35 feet.

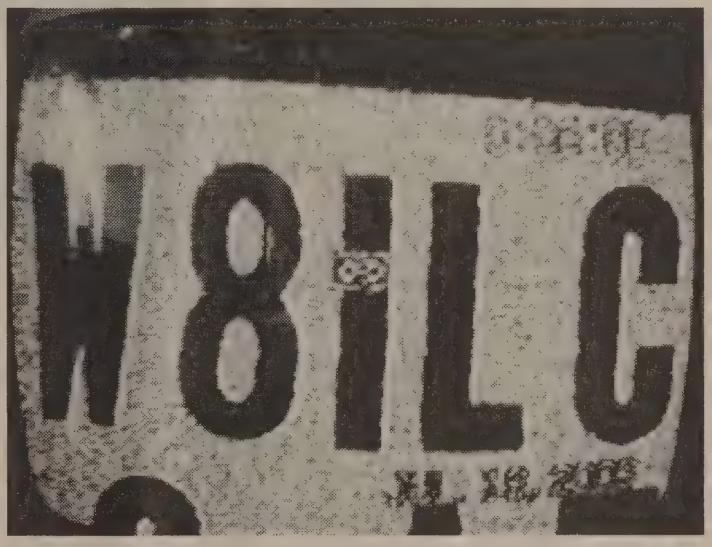


Even with this modest station Ron has worked 5 states IL, IN, MI, OH, WV and his best DX to date is with KB9WLM at 316 miles! Ron has plans to improve his station that include 70 feet of tower and the long awaited Down East amplifier when or if it



Station of Ron, W8ILC

ever comes in. In the meanwhile Ron is setting up a Mirage D1010 to increase his output. Although I have worked Ron several times I couldn't seem to find a screen capture of him coming in here so here is one of him coming into Cincinnati OH sent in from Farrell, W8ZCF.



Tech Tip:

One of the problems we all have experienced with ATV is water in the feedlines. You may be experiencing it now and not aware of the problem. If you haven't serviced your antennas or connections in a few years you very well may be having an issue that sneaks up on you and is degrading your performance. Much of the early 9913 type cable used a spiral dielectric and air center core and should be avoided completely! I have actually seen water dripping out the bottom of 125 foot piece of this line hooked to my amp. Water and HV do not, or should I say

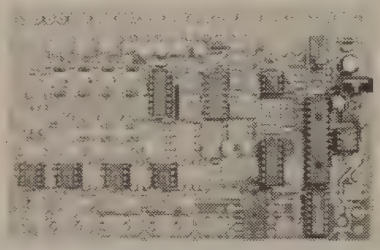
ATVC-4 Plus

Amateur Television Repeater Controller

ATVC-4 Plus is Intuitive Circuit's second generation Amateur Television repeater controller. ATVC-4 Plus has many features including:

- **Five video input sources**
- **Four mixable audio input sources**
- **Non-volatile storage**
- **DTMF control**
- **Beacon mode**
- **Robust CW feedback**
- **Password protection**
- **Many more features**

For example a major new feature is four individual sync detection circuits allowing for true priority based ATV receiver switching. $349.00



Intuitive Circuits, LLC

3928 Wardlow Ct. - Troy, MI - (248) 588-4400

http://www.icircuits.com

BETTENDORF IA Repeater
July 30, 2006 10:49 PM

For the last 1/2 hour I've had WB0BIZ repeater coming in on 421.25 and its in a continuous loop IDing. Getting a P1 to P2 with color.

Took a little doing to get a screen capture which is not as good as received signal. It was on till about 12:30 when I think the band dropped. I saw the signal on 2 different receivers one being the PC Electronics with Gene's 22 element beam and a color tv on ch 57 using my wooden yagi. There was about a P difference between the two.

John - KA9SOG - Rockford, IL

should not be mixed. If your line and or connectors have air in them and most do they will actually condense moisture after a time causing the ugly green corrosion that slowly kills system performance. There is a solution out there and some may not be aware of it. It is a dielectric paste called STUF by Cross Devices , yes STUF is available from AES at around 5 bucks a tube and other 2-way shops. You simply flood the connector with the paste and screw it on slowly letting the excess material ooze out of the threads and cracks. It keeps the water out and keeps it from condensing by filling the voids inside the connector. Once STUF is inside you should still do your regular tape/heatshrink/liquid electric tape procedures to further protect your connections from the elements. Remember if you have air core line even Stuff won't keep moisture from forming inside the sealed air chamber of the feedline. You should go with a foam filled line and give up a few tenths of a DB to stay on the air!

WANT TO KEEP THIS COLUMN IN ATVQ ??

SEND IN YOUR DX REPORTS AND PIX!!!

Important DX Info:

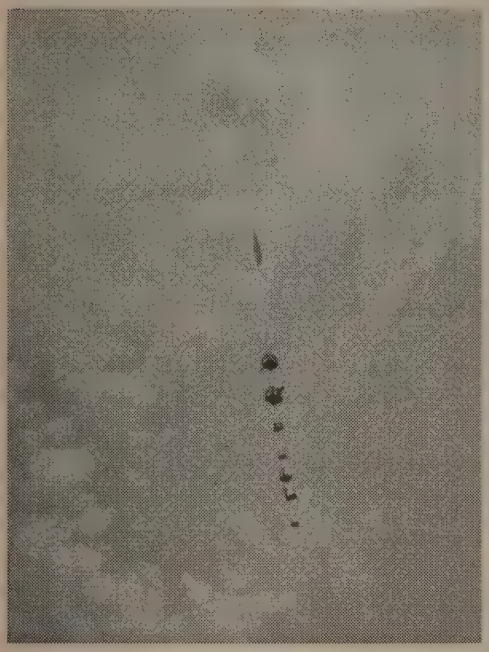
The new ATV DX Record page at P. C. Electronics:
http://www.hamtv.com/atvdxrecord.html
If you have done better, be sure and send your information to Tom at P. C. Electronics. Let's hope we see those records grow this summer!

The Hepburn tropo forecast page has moved again!
http://www.dxinfocentre.com/tropo.html

If you are online you can post ATV CQ's and reports to the New ATV Logger page:
http://dxworld.com/atvlog.html

The ACE Academy

By Paul Verhage - KD4STH Email: Paul.Verhage@boiseschools.org
5720 3rd Ave.
Nampa, ID 83686



In six days from the end of June to the beginning of July, I had one BalloonSat class and two back to back launches. One launch was local and the other was 1,100 miles away. I'd like to describe the first launch in this article.

Every summer the Idaho Department of Aeronautics holds a summer camp for middle school students. The summer program, called the ACE (aviation career education) Academy, is an all day camp that runs from the last Monday to the last Thursday in June. The class introduces kids to the world of aviation. They're kept busy touring aviation locations, like flight towers, and checking out aircraft and flying in them. Mr. Frank Lester is the driving force behind ACE. A couple of years ago he contacted the Idaho Space Grant Consortium about adding BalloonSats to ACE Academy and they recommended he contact me. Since then, I've helped ACE with two near space launches and I've loved it.

BalloonSats are simplified near spacecraft. They don't carry tracking equipment, so instead of APRS stuff, BalloonSats are stuffed with a datalogger, a sensor (usually a temperature sensor), and a camera with timer. It appears BalloonSats were originally developed by the Colorado Space Grant Consortium at the University of Colorado, Boulder. At CU, BalloonSats are used to introduce students to engineering. The BalloonSat concept has been so successful that today even pre-college students are building them. After I was introduced to them, I wrote an article about BalloonSats for my Nuts and Volts magazine column. The changes I recommended have been implemented by the ACE Academy. So let me explain how ACE Academy builds BalloonSats and then tell you about their flight this year.

The traditional BalloonSat is made from ¼ inch thick foam core, which is a layer of stiff Styrofoam with paper siding. It's the backing used on most posters and pictures. Foamcore is dimensionally stable and can be glued to because of its paper facing. It's cut easily with an Exacto knife, but if the knife is dull, it tends to rip out chunks from the Foamcore. BalloonSat teams glue their Foamcore airframe together with hot glue. The hot glue makes building the airframe faster than using epoxy or white glue.

Since BalloonSats don't carry APRS trackers, they must be tethered to a traditional near spacecraft. The tether is a thin cord running down from the near spacecraft and through the center of the BalloonSat. The tether exiting the BalloonSat is tied to a metal split ring. The split ring is a simple way to prevent the BalloonSat from slipping off the cord. To keep the cord from cutting into the BalloonSat airframe, a metal or plastic tube is glued through the center of the airframe. The BalloonSat is usually finished by wrapping in a layer of aluminum duct tape.

The interior of the BalloonSat airframe is made large enough to hold the data logger and camera. Hobo data loggers are great data loggers. They're about the size and weight of a small box of matches. They're programmed to collect data on specified schedule and can delay recording data for days if necessary. A BalloonSat team programs their Hobo the day before a launch and makes sure it will start collecting data shortly before the expected launch time. The most frequently used Hobo used in a BalloonSat records its own temperature (which is the internal temperature of the BalloonSat) and the voltage of an external temperature sensor. You can get more information on Hobo data loggers from the OnSet website, **www.onsetcomp.com**.

The camera I've seen used most often in a BalloonSat is the Canon Elph, an APS film camera. An opening in the side of the BalloonSat airframe allows the camera's lens to see the outside world. The camera is usually positioned so that it records images of the horizon, but it's sometimes oriented to take pictures of the ground. The Elph cannot be programmed to take pictures repeatedly. So the camera is modified to operate from a 555 Timer IC circuit and relay. Since the camera shuts itself off after not being used for five minutes, the timer circuit must trigger the camera's shutter every three to four minutes.

After assembling their BalloonSats, teams test their designs by immersing them into Styrofoam coolers filled with dry ice and dropping them to simulate a landing under a parachute. I find students like drop testing their BalloonSats far more then they need to be tested. If you want more information on BalloonSats, check my Nuts and Volts column. There are reprints along with my free near space book at www.parallax.com. Click under downloads, then customer applications to find them.

This year the ACE Academy met from June 26th to the 28th. I worked with the students for half days on the 26th and 27th. On the first day I explained what they were to do and they spent a good chuck of the rest of the morning building their BalloonSats. The 27th was busy with students testing their

BalloonSats and programming their Hobos. Because of liability issues and the fact that we're not exactly sure where the BalloonSats will be launched or recovered, students didn't attend the launch on the morning of the 28th. Instead two ham operators and ACE Academy staff helped launch, chase, and recover the BalloonSats. Back at the ACE Academy, students followed the progress of the mission at **www.findu.com**.

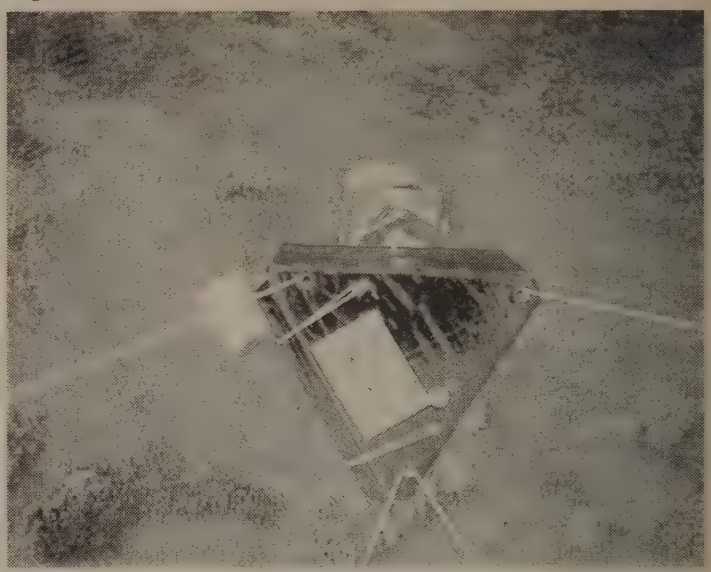
The winds aloft mandated that we launch from Oregon, close to the Idaho border. The balloon filling went extremely well, as there was almost no surface wind to contend with. While finishing up, the tracking capsules were started and they began recording images. Here's one that my near spacecraft took of the launch crew.

Everyone helps

Because of the nearly non-existent surface wind, we launched the near spacecraft by raising it to an upright position by hand. Usually the near spacecraft is launched by the Hail Mary method, in which the stack is laid out down wind from the balloon. When the balloon is released, it drifts down the stack pulling each element on the stack up. Here's an image the near spacecraft recorded of us launching it.

Launch

Just after launch the near spacecraft recorded another image. This one shows the BalloonSats dangling below the two tracking capsules.



Free at last

It was an overcast day, but before entering the clouds, the near spacecraft recorded an image of the pivot irrigators in Oregon, near the Idaho border.

From below, the clouds were a uniform gray deck. But from above, the clouds looked more like a head of cauliflower as the next picture shows.

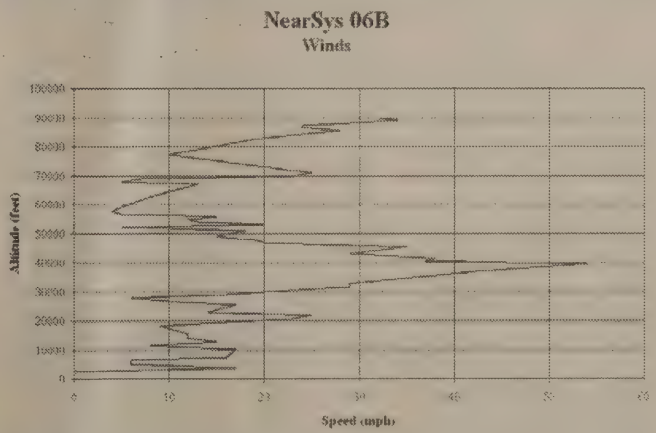
The flight reached an altitude of 90,529 feet before the balloon burst. The highest altitude picture was recorded close to an altitude of 90,000 feet. The black BalloonSat is mine and it carries a white tube containing a miniature weather station I've designed for near space. Below my BalloonSat you can see three of the four student BalloonSats. I tend to make my BalloonSats dark so they absorb solar heat. I've noticed students like making their BalloonSats colorful so they stand out.

Since my near spacecraft carried a digital camera, I collected over 200 images on this flight. Most interesting is how the digital camera distorted images when things were moving fast. In the next image, the BalloonSats are warped into strange shapes by their movement as shown below.

The flight only flew 17.9 miles. So the chase was pretty leisurely. The chase crew was able to see the near spacecraft land about 500 feet off the road in a pasture. But before retrieving it, we asked the owner for permission. The land owner even same out to see the near spacecraft for himself. Here's what we found in the pasture.

After carrying everything out, we stopped for a group photo. This one was taken by Dave Dobbins.

One reason the flight recovered so close to the launch site can be seen in the winds aloft data. This chart is based on the GPGGA and GPRMC sentences from the GPS receiver onboard the near spacecraft. You can see the balloon experienced a very mild jet stream at 50,000 feet. Not only that, but the jet stream was very narrow.



All in all, flight NearSys 06B was fun. We were able to recover the flight soon enough that I had time to drive home before heading out to my next flight in Nebraska in three days. But hey, that's another story.

ATVQ

Easy Walkabout Antenna For 2.4 GHz

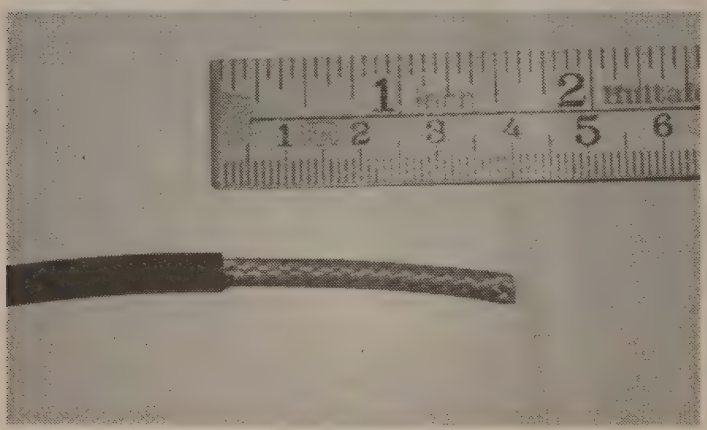
Ragnar Jensen Email: ragnar@jensenjensen.com
Östra Banvägen 3
SE-184 52 ÖSTERSKÄR
SWEDEN

How to build a 2.4 GHz ground plane antenna for the ICOM IC-R3 from a piece of coax cable

What you need:

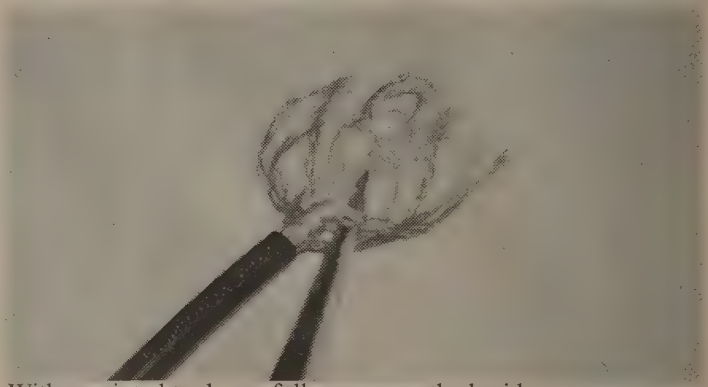
A short piece of 50 ohm coax cable.
A sharp knife.
A pointed tool of some sort.
A ruler.
A soldering iron (optional).
A hot glue gun.
30 minutes of time.

The raw material: a short piece of 50 ohm coaxial cable.

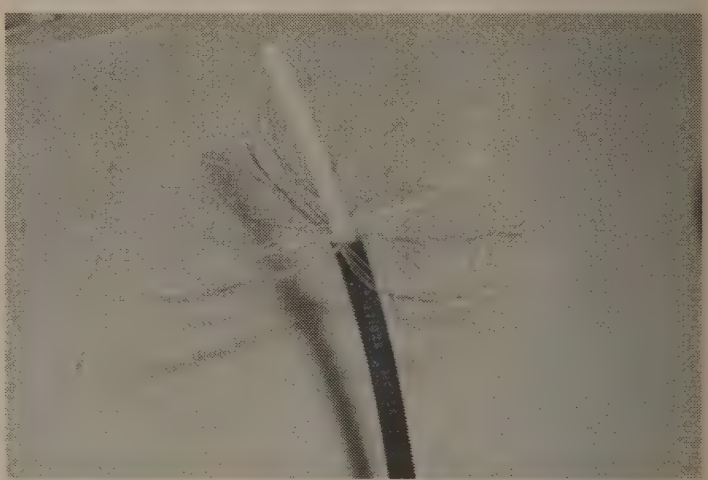


Cut off approx. 40 mm (1 ½ inches) of the outer insulation. This exposes the braid that forms the shield of the cable.

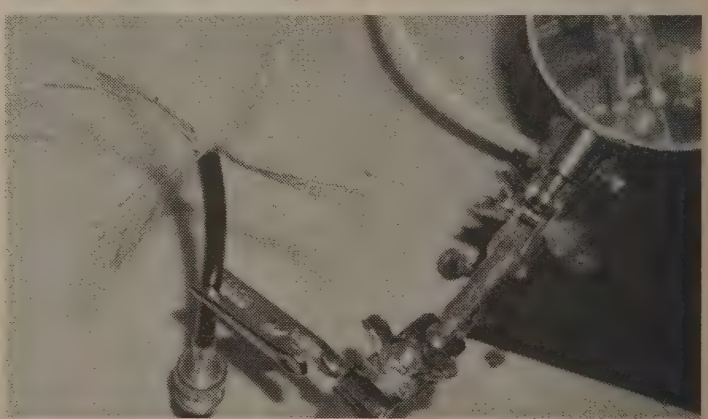
Push the braid down to expose the inner insulation.



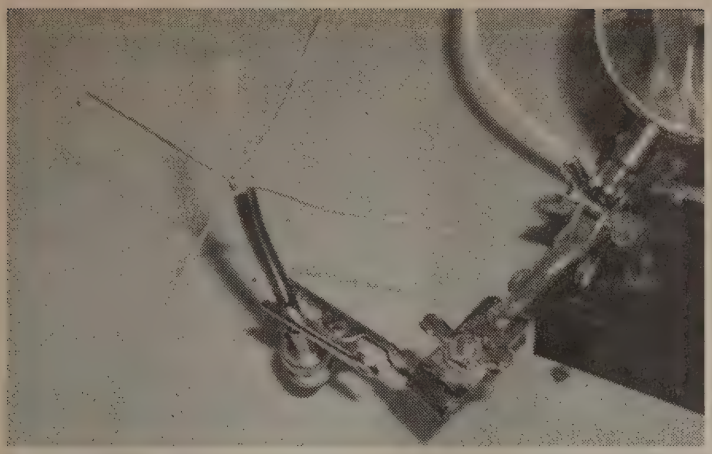
With a pointed tool, carefully unweave the braid…



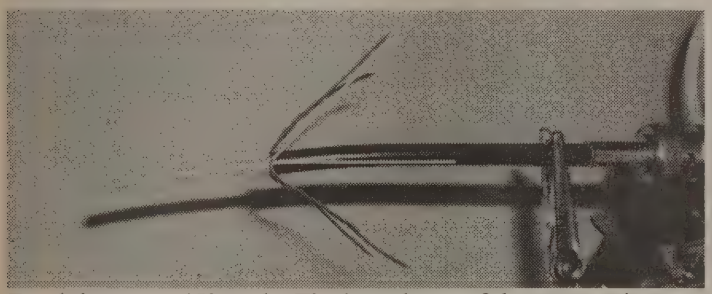
…until you have something like this.



Form into four equally sized and equally spaced bundles. These will become the ground plane elements.



Twist them hard.

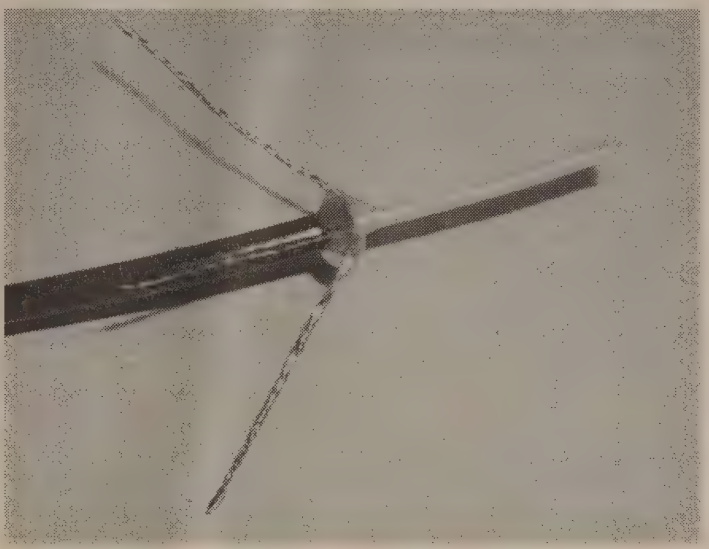


Bend them to a 45° angle. The impedance of the antenna is a function of the angle. A 45° angle will result in an antenna impedance of approx. 50 ohms.

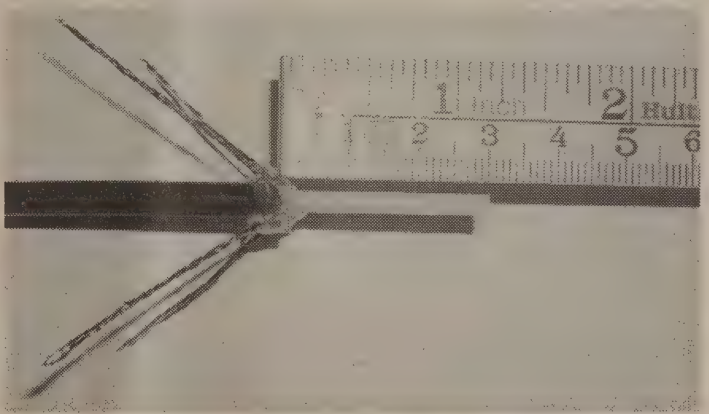
Cover with solder. This step is optional, but it makes the ground plane elements hold their shape better and it keeps them from untwisting.

Finished with the soldering.

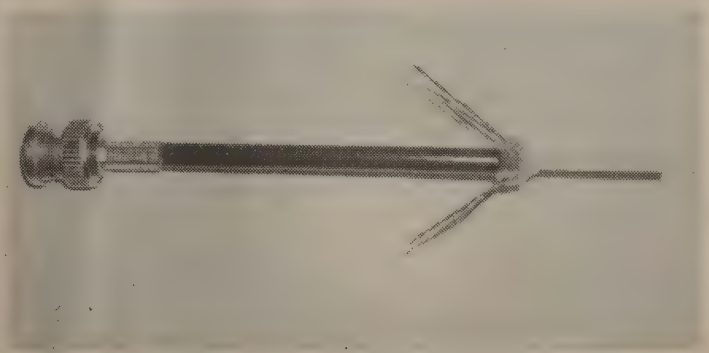
A few drops of hot glue…



…will help keep the shape.



Cut all five elements to a length of 30mm (1- 3/16 inch)



And we are done!

Odd's & End's

ATV DX

I saw KC8LMI (morning 7/15) and K9KLM (morning 7/16) through our repeater in Lafayette, IN during the opening.

Repeater information and streaming video at:
http://IndianaATV.com

Mark (KB9KHM) - **kb9khm@amsat.org**

Slow Scan TV on ISS

Slow Scan TV (SSTV) has been activated for few orbits from the International Space Station.

The Marex SpaceCam1 software contains a feature called "Slide Show" mode. It allows the crew to preload a directory full of images that will be automatically transmitted to Earth. The crew will not need to keep pushing a button to send images. In theory the system can run for weeks at a time without crew involvement.

For more information see the Marexmg Web page:
http://www.marexmg.org

Banquet

The Central Illinois/St. Louis Area Amateur Television Club will hold their 21st annual banquet on Sunday, November 12, 2006 at the Ariston Restaurant in Litchfield, Illinois.

The banquet starts at 4 PM with a get acquainted hour and dinner served at 5 PM. Following the meal, awards will be presented including the club's annual ATV Operator of the Year plaque. A large prize drawing will follow.

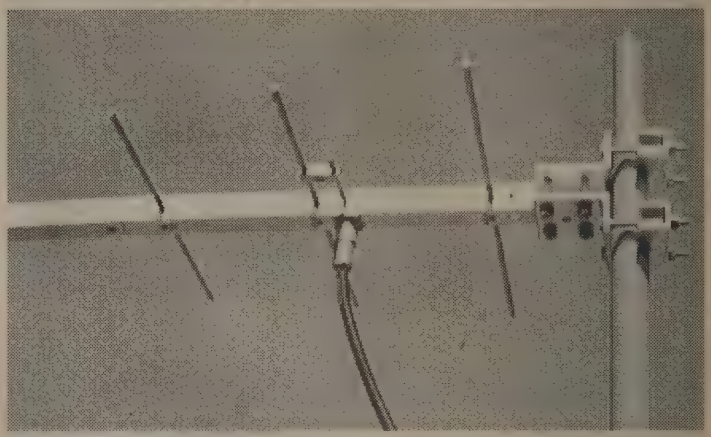
There will be a small area for swap and sale items. For further information contact Scott Millick K9SM at 217 324-2412, **smillick@wamusa.com** or 222 N. Jackson St., Litchfield, Il 62056.

New Product Announcement

Dave, W6OAL, at the Olde Antenna Lab has come up with a rock solid antenna mast clamp, primarily for his 5 and 10 element 70 cm beams, that will keep them at right angles to the mast even with a flock of birds sitting on them. For portable applications, the single mast clamp that comes with the antenna is OK, but for home or link applications over time, it can loosen up. This mast clamp is solid and won't change. You can end or center mount it on the 1" square boom used on the OAL 5L-70cm and 10L-70cm beams and it has two mast clamps that accept up to a 1.5 inch mast.

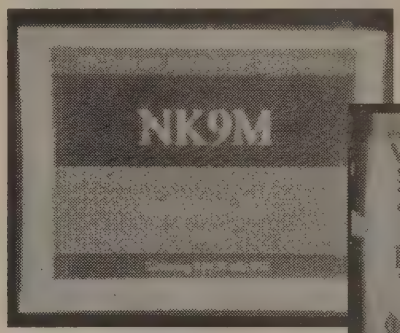
The MP-1.5 will also accept the 5L-70cm and any 1" dia round boom beams. Round boom beams need a small piece of sand paper between the boom and the clamp to keep them from twisting. Price is $30. **http://www.hamtv.com/oal.html**

Tom W6ORG



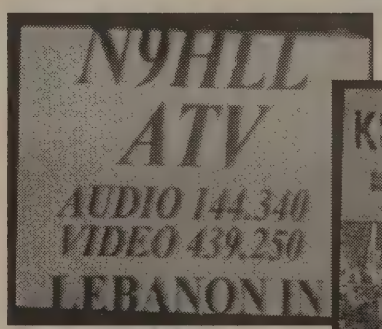
A Little More ATV DX

Here are a few ATV DX contacts that I made on July 20, 2006. Two are more local, KA9SOG and W9ZIH. - Gene -WB9MMM

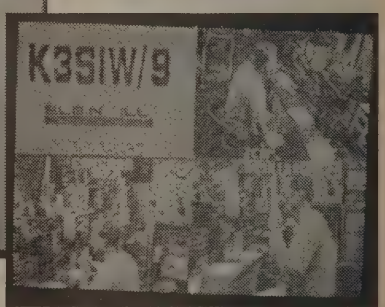


NK9M

W9ZIH

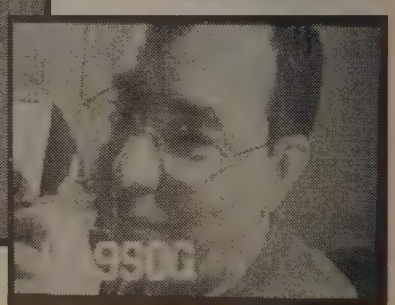


N9HLL

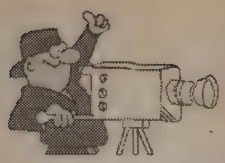


K3SIW/9

KB9PWQ



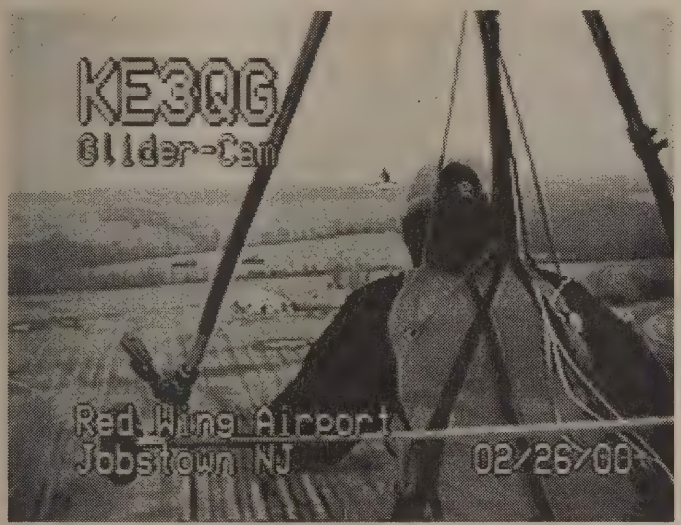
KA9SOG



HAM TV
FUN AND INEXPENSIVE!

What is Amateur Television?

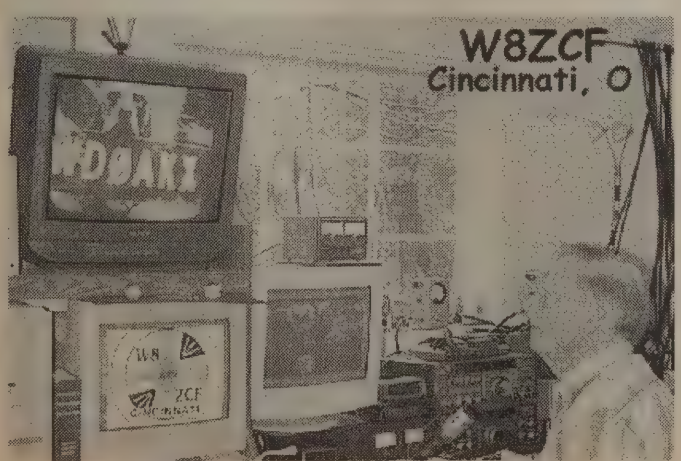
Amateur Television is fun and can be inexpensive. But like any part of the ham radio hobby, you can spend about as much as you care to. There is always that other piece of equipment that will make the TV Station Ham Shack really neat. So you can start small and grow as the $$$ permit.



ATV from a hang glider

Amateur Television is REAL LIVE TV! Just like the television that you watch on your TV at home, you can make your own broadcasts to other hams, to show off your ham shack, your latest project that you have built, your beautiful wife (handsome husband), your puppy doing tricks, or just about anything, within the ham radio rules and regulations that you might want to broadcast. One of the special items that we can do as hams is to rebroadcast the NASA channel that is available on "C" band satellite receivers as a free program, and also now available on some of the smaller dish services as well.

Since ATV is allowed only on frequencies above 420 MHz, you can not make the pictures "skip" around the world, so your transmissions will be pretty much line of sight.



W8ZCF working DX with ATV

However, during a band opening, you can work other ATV'ers that are hundreds of miles away. DX ATV can be lots of fun, but have the VCR ready to record those long distance contacts! Then you can take them to the next radio club meeting to show others how it works. 500-mile contacts are not that uncommon, and more than 1000 miles has been done several times. ATV has even been sent back and forth to a space shuttle, on mission STS 37! I'm willing to bet there will be more shuttle missions in the future with ATV and maybe on the International Space Station. Personally, I can't wait.

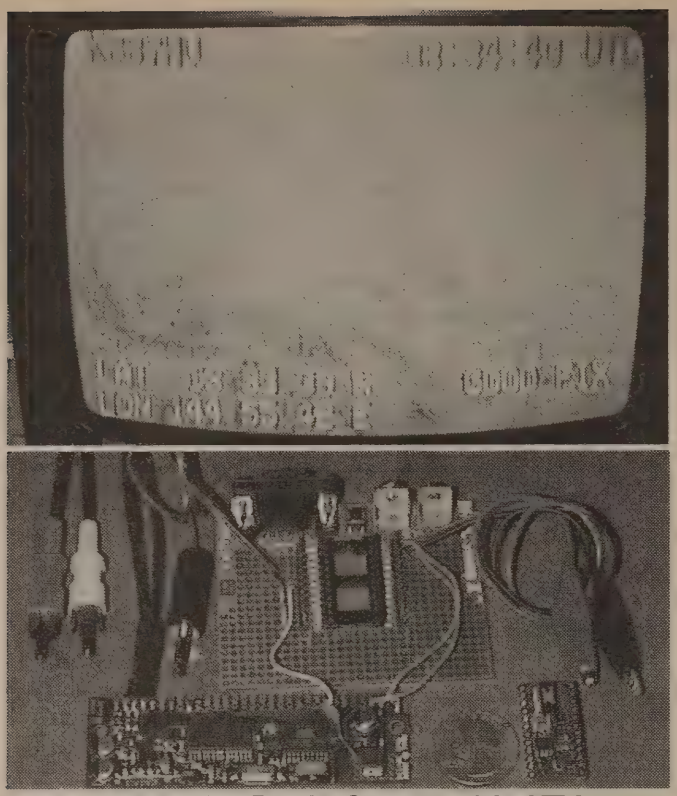
Portable and mobile operation are easy, just do not watch ATV while you are driving! Ham TV operators have found how easy and fun it is to operate in a variety of ways including hot air balloons, helium balloons, kites, cars, trucks, trains, planes, gliders, back packs, canoes, boats, ships, mountain tops, and ATV Repeaters. Seeing DX from a 1-watt transmitter at 110,000 feet up in the air will allow stations to see live video from a camera hung under a helium balloon for up to 500 miles in any direction.

Many Hams are using ATV for valuable public service assistance. Disaster scene information can be sent back to public safety officials, parades, athletic events, boating contests, and marathons.

R/C control plane with ATV camera

If R/C control also has your interest, why not put your Ham TV in your R/C plane, helicopter, or boat and fly from the pilot's seat. Add real adventure to your earth bound self as your vehicle takes you to places that you cannot go yourself.

View of landing area from R/C airplane



Using the Basic Stamp with ATV

If you like to build things yourself, ATV is one place where you can have fun as there are lots of articles in Amateur Television Quarterly (ATVQ) to help you along. Projects range from small to large, so take your pick and get started. We sell many past issues of ATVQ due to the quality of the articles that have been published. As this is written, ATVQ copies are still available from 1994 to present. ATVQ is also available on CD-ROM in Acrobat PDF format, so even the older issues can still be acquired. We keep an index of all articles from day one on our web site, **http://www.ham-pubs.com**, so if you are looking for a special subject you can search for it very easily. We do not provide this in paper form as it is around 80 pages of information.

So ATV is a lot of fun. All you need is your Ham License and the desire to have fun. The following pages will give you a little more insight on how to get started.

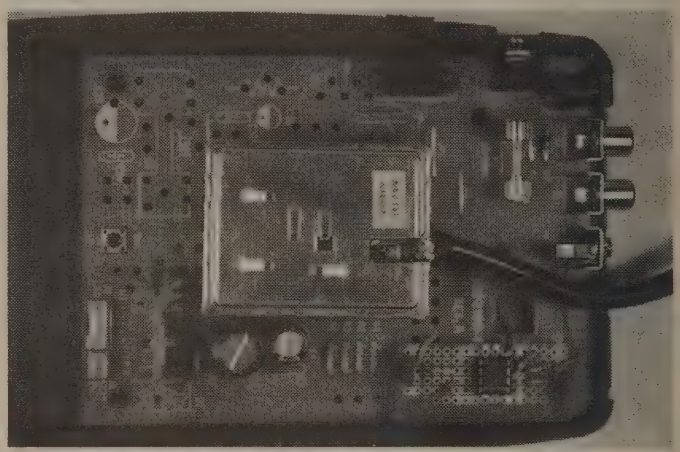
What is SSTV and how is it different?

Many people that I talk to think that Slow Scan TV (SSTV) is the same as Fast Scan TV (ATV), but they are very different. SSTV is a method of sending still pictures that are converted to sound through your microphone connection on your transmitter. Since it is just an audio frequency, it can be broadcast on the HF bands and pictures can be sent all around the world. Fast Scan TV is a very wide bandwidth, which allows you to see people/things live with motion, and is only allowed on 420 MHz and above.

What do you need to get started in ATV?

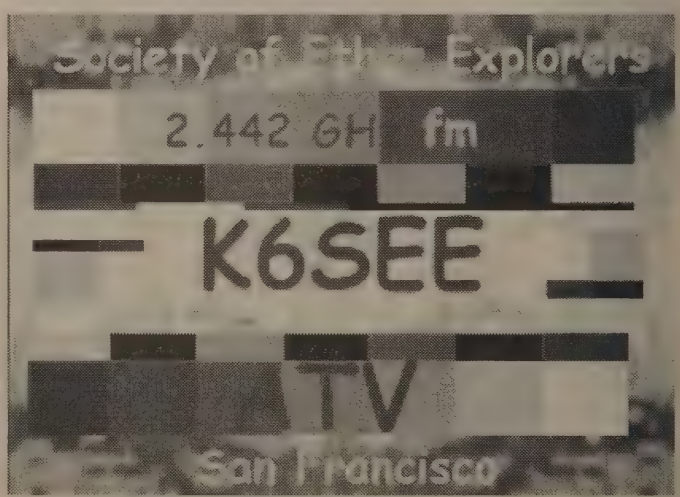
Since ATV is used on frequencies from 420 MHz and higher, all Amateur Radio operators can participate, regardless of the class of license.

By convention and agreement, ATV is operated on set frequencies. The popular frequencies are 439.25, 434.00, 426.25, 421.25, 910.25, 1253.25, 1265.00, and 1289.25 MHz. In the last few years, there is also increased activity on 2.4 GHz (due to the low price of WaveComm transmitter / receivers) and also on 10 GHz. By far the most popular is 439.25 MHz and in the southeast US and Florida 434.00 MHz. ATVQ publishes news of station and repeater operation which includes frequency information. As an example, in southern California, there are 7 ATV repeaters linked together to provide coverage from San Diego, to Los Angeles, to Las Vegas (NV), to Santa Barbara. There are plans to reach San Francisco and Phoenix, AZ. ATV is also on 913.25 MHz and 919.25 MHz. Hams share the 900 MHz band with 6 different radio services, including automatic vehicle location systems, and low power part 15 TV transmitters for home use. These new consumer TV transmitters can provide low cost ham TV exciters/receivers for the band as well as a potential audience.

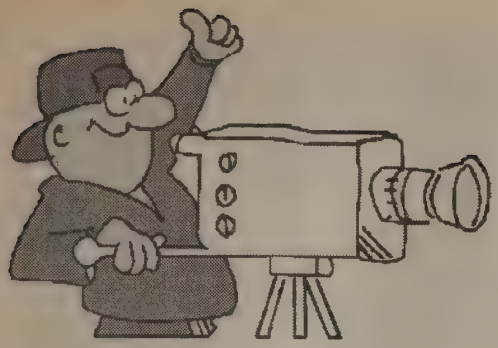


Inside of a WaveComm transmitter for inexpensive ATV on 2.4 GHz

One of the most popular bands for ATV is the 420 MHz band. One of the reasons is that the higher frequencies will not give as good a distance. Another is that most people have a receiver in their home already! Cable channels 57 through 60 are on different frequencies than channels 57 through 60 that are broadcast over the air. Therefore if you have a cable ready TV, and connect it to an outside antenna, you can receive ATV as follows:



ID screen of San Francisco ATV Repeater



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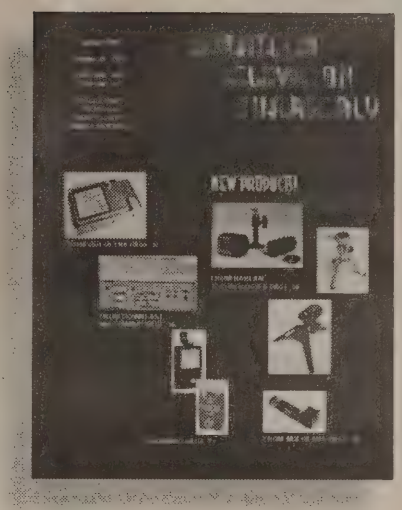
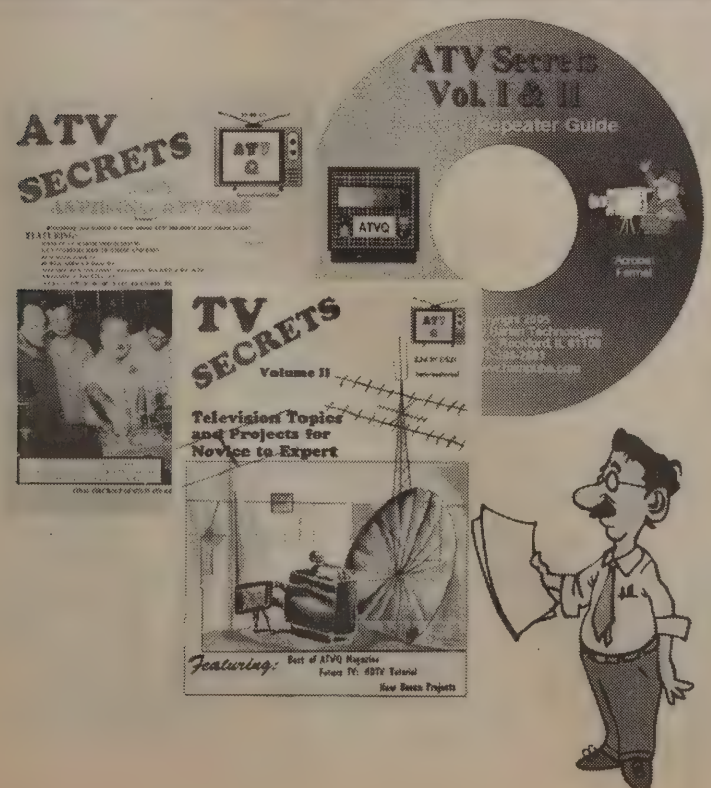
Life	$399	$439	$579





ATV Secrets Vol I & II On CD

ATV Secrets is a great place to start your ATV adventure! Volume I has 64 pages, tightly packed with information covering all aspects of getting started, where to find activity,equipment, how to DX, and answers frequently asked questions about power, antennas, vestigial sideband operation and more. Everything the beginner in ATV needs!

Volume II is a mammoth book with 292 pages of technical material. More than 40 authors present over 90 technical projects and theory topics to fully acquaint anyone from novice to expert in the how and what of TV, video, and ham TV. Divided into 11 chapters, the book presents tested projects for all areas of interest in ham TV including antennas, amplifiers, repeaters, receivers, transmitters, video accessories, and more!

Volume II is sold out in the paper version, but available on CD.

ATV Secrets Volume One (paper) $8.95
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ATV Secrets I & II on CD $25.00
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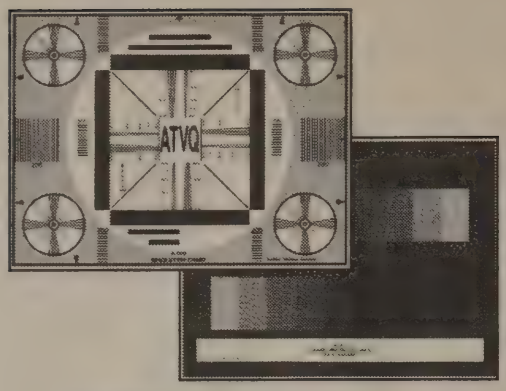
FULL COLOR TEST CHART



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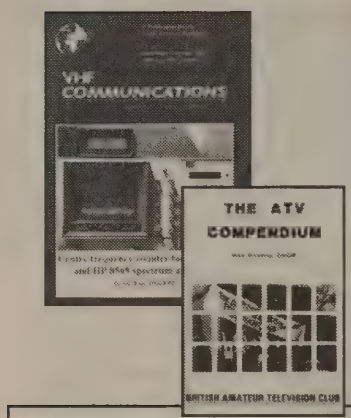

VHF Communications

A quarterly publication from KM Publications in England that is a must for the technically minded. Lots and lots of articles for those that build projects in the VHF and above range.

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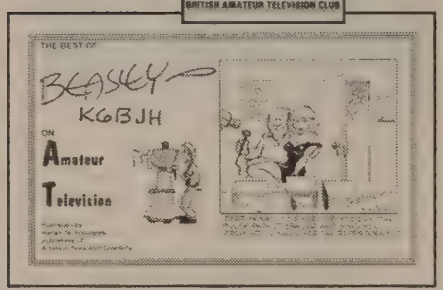

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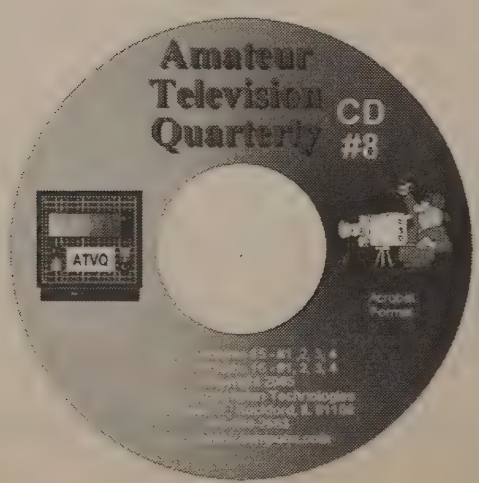

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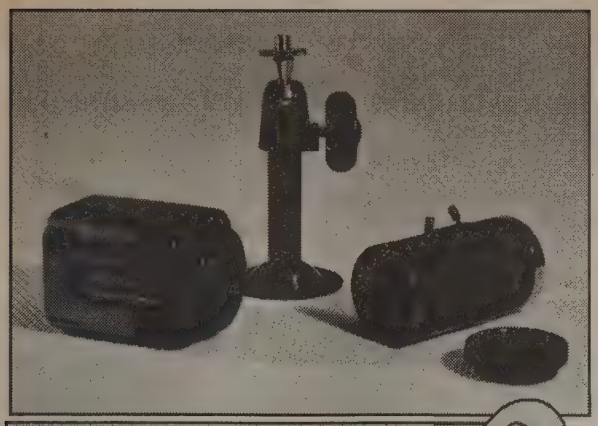

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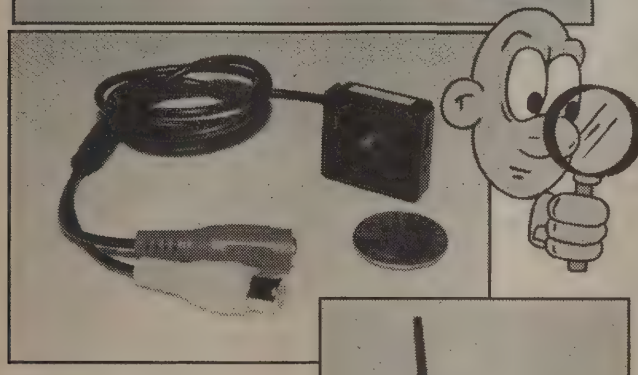

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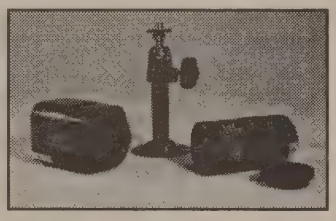
Auto White Balance
S/N Ratio - More than 46 db
Electronic Shutter - 1/60-1/1000,000 Sec
Lens - C/CS Mount- 6-15 mm - f1.4
Power - 12V±10% DC - 100 ma.
Small size - 40x40x54mm
Power supply and cables not included.

Complete package Only
$169.00



Minature Pinhole Color Camera

Color CCTV Camera - DV-3225CP1
Sharp 1/3" CCD
NTSC - 420 Line
1.0 Lux - 1 Vp-p 75 Ω
Auto White Balance
S/N Ratio - More than 46 db
Electronic Shutter - 1/50-1/100,000 Sec
3.7 mm cone pinhole lens
Power - 12V±10% DC - 100 ma.
Small size - 25x25 mm
Power supply and cables not included.

Your choice
$109.00
Plus shipping & tax in Illinois

Minature Wireless - 2.4 GHz Color Camera

Color CCTV Camera - DV WX-3334C
Four Frequencies on 2.4 GHz
Sharp 1/3" CCD - NTSC - 420 Line
1.0 Lux - 1 Vp-p 75 Ω
Auto White Balance
S/N Ratio - More than 46 db
Electronic Shutter - 1/50-1/100,000 Sec
3.6 mm board lens
Power - 12V±10% DC - 100 ma.
Small size - 34x34 mm
Power supply and cables not included.

Water-Proof Color Camera

Color CCTV Camera - DV-262CW
Sharp 1/3" CCD
NTSC
420 Line
1.0 Lux
1 Vp-p 75 Ω
Auto White Balance
S/N Ratio - More than 46 db
Electronic Shutter - 1/50-1/100,000 Sec
6.0 mm - F1.2 lens
Power - 12V±10% DC - 100 ma.
Small size - 25x25 mm
Power supply and cables not included.

$119.00
Plus shipping & tax in Illinois

If in Illinois - add 7.25% tax
Shipping in USA $10.00 per camera, cable, tripod combination

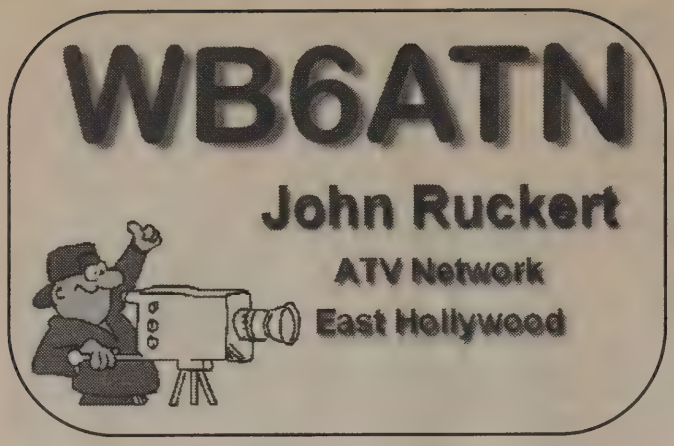
12 Volt - 300 ma. Wall Transformer
$6.00

Video & Power 2.1 mm Cable - 25 feet RCA to BNC
$14.95
50 foot $19.95

Mini Tripod Folds to fit in pocket
$6.95

5-Section Tripod Legs extend to 7 1/2"
$14.95

Connectors
F-F to BNC-M
RCA-F to BNC-M
RCA-M to BNC-F
$3.00 ea.



Quantity prices available!

Name Tags by Gene

Beautiful, colorful, plastic name badges are available with clip, locking safety pin, magnetic bar, luggage strap, or lanyard.

Check our samples at **www.hampubs.com** , or make your own design. Any photo can be used, such as a club logo or we have many stock pictures to use as well.

Prices:
Name tag with clip $10.00
Name tag with pin $10.00
Name tag with magnet $12.00
Name tag with lanyard $12.00
Name tag with luggage strap $10.00

Quantity	Model	Description	Price ea.	Total

Total	
If in Illinois add tax 7.25% (No tax on name tags or subscriptions)	
Shipping	
Final Total	

Send or fax to:
Harlan Technologies
5931 Alma Dr.
Rockford, IL 61108
815-398-2683 - voice orders
815-398-2688 - fax
Email: **atvq@hampubs.com**
http:www.hampubs.com

Name _____ **Ham Call** _____

Address _____

City _____ **State** _____ **Zip** _____ **Country** _____

Phone _____ **Email** _____ **@** _____

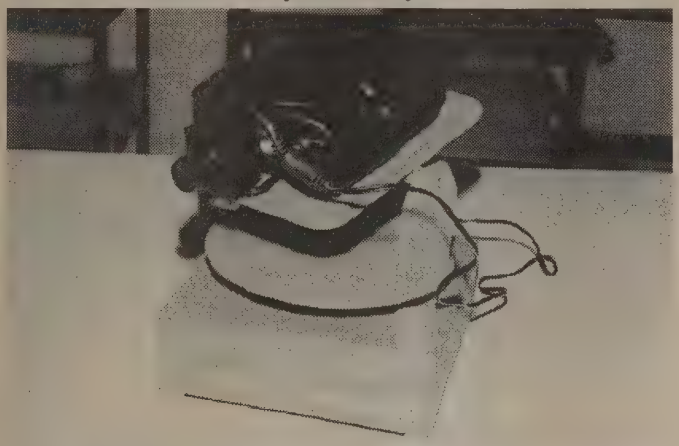
VISA - M/C - AMEX

Credit Card # _____ _____ _____ _____ **Expires** ____ ____ **Approved** _____

Signature _____

Channel 57 = 421.25 MHz
Channel 58 = 427.25 MHz
Channel 59 = 434.00 MHz
Channel 60 = 439.25 MHz

It will help to know the polarization that is being used in your area, as you can easily loose 15 db by having the antenna set to the wrong polarization. Most of the 420 MHz ATV is done with horizontal polarization except in the southwest US and Florida where they use mostly vertical.



Homemade camera remote position control

Where do you get information about ATV?

Your best source of information about ATV is **Amateur Television Quarterly**, as the publication is devoted entirely to ATV, SSTV, and projects. **ATVQ** contains an assortment of articles and features covering technical topics in both the beginner and advanced flavor, build it projects, station operations, and repeater news. ATVQ is the ONLY publication devoted to ATV in the US.

There are some European publications that are also very good such as CQ-TV, VHF Communications, and Der TV Amateur (in German only). The first two can be subscribed to through Harlan Technologies for your convenience or through their web site.

ATV in Munich, Germany

ATV used for Field Day

Ham TV can do more than any other mode of operation. It offers all the fun, thrills, excitement, learning opportunities and public service that ham radio offers, plus the added advantage of visual communication.

What frequencies are used for Ham TV?

Ham TV, live television that you can watch at home, is mostly on the 420-450 MHz band (70 cm), but there is also activity in the 902-928 MHz band (33 cm), and in the 1240-1300 MHz band (23 cm), in the 2.4 GHz band (13 cm), and also on 10 GHz.

70 CM ACTIVITY

Video Carrier	Audio Carrier	Use	Cable TV Channel
439.25 MHz	443.75 MHz	Simplex and repeater inputs also a few repeater outputs	**60**- 439.25 MHz
434.00 MHz	438.50 MHz	Simplex and repeater input	**59**– 433.75 MHz
426.25 MHz	430.75 MHz	Repeater output & some inputs	**58**– 427.25 MHz
421.25 MHz	425.75 MHz	Repeater output	**57**– 421.25 MHz

ATVQ editor, Gene - WB9MMM doing a little public service work on 2.4 GHz.

Since the Cable TV channels are so close in frequency to our ATV frequencies, you can take your cable ready TV, leave it set for Cable, but connect it to an outside antenna instead. If someone is broadcasting ATV in your area, and you have a sensitive input on your TV with a good antenna, you just might see video! Generally, TV sets are not as sensitive as an ATV receiver, but it is one way to get on cheap.

What does 144.34 MHz have to do with ATV?

In many areas of the country, ATV'ers use two meters, 144.34 MHz simplex, as the talk frequency. When I go through a city where you know there is ATV activity, I know most of them are monitoring 144.34 MHz and I will give a call. They are usually just waiting for someone to send pictures to!

New ATV DX Web Site added to www.hampubs.com

Not many hams think about ATV when you talk about DX. But it does exist, and here is some proof. This site will be expanded on as time and band conditions exist!

First, there is a web site where ATV DX is tracked by ATV'ers real time. Go to: **http://dxworld.com/atvlog.html** to check it out. If you watch this site, you will know when to turn the ATV on. Wait a minute, it should always be on, right?

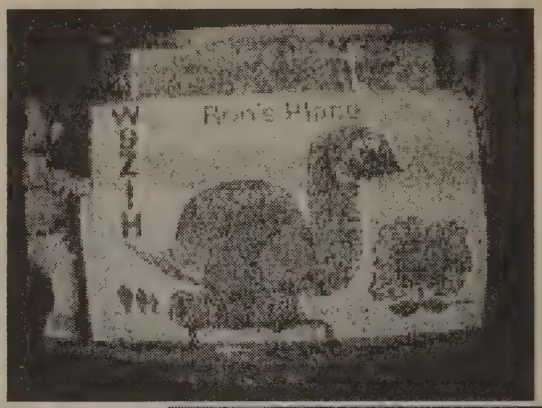
But, if you want to really know when to prepare for those tropospheric band openings, check out: **http://home.cogeco.ca/~dxinfo/tropo.html** This site will give you a heads up as to when to expect that opening.

But, wait, prove it to me that you can really "see" far away with low power and Amateur Television. Here is what Bill Brown, WB8ELK, saw July 23-24, 2005 from Alabama: **http://www.wb8elk.com/atvdx.htm** I can't get over what I see.

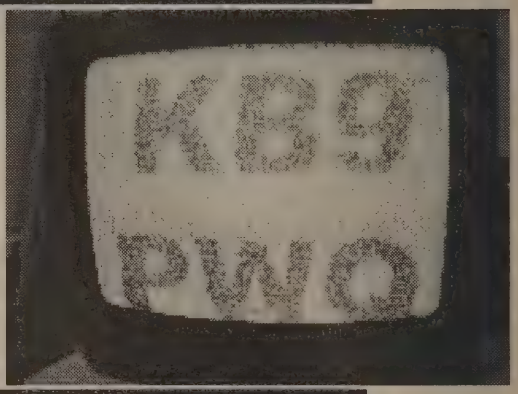
So, we will try to keep new information coming as it comes in to us. Let us know what you see.

ATV DX - July 23 & 24, 2005

stations worked by WB8ELK in Alabama EM64oj

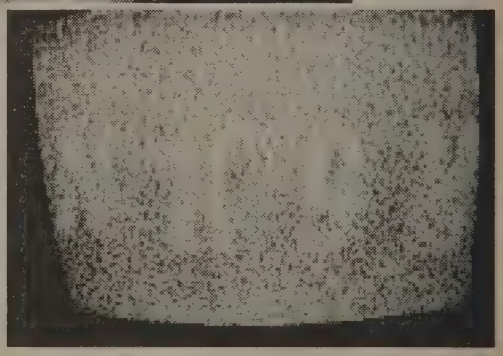


Malta
IL
533 mi



Harwood
IL
527 mi

Plano
IL
512 mi



Oswego
IL
508 mi

ATVQ
5931 Alma Dr.
Rockford, IL 61108
SUBSCRIPTIONS TO ATVQ 1-815-398-2683
FAX 815-398-2688
E-MAIL ATVQ@hampubs.com
http://www.hampubs.com

ATV Contest 2006

By Gene Harlan - WB9MMM - Email ATVQ@hampubs.com
5931 Alma Dr.
Rockford, IL 61108

This year did not have the great band opening that we all had wished for. There were a couple, one of which I experienced just after putting up a 22 element 440 yagi for ATV. Had a good time seeing ATV as I had not seen it before. Band openings can be fun! KA9UVY has shown us how important antennas are! That may be the most important thing we learn this year. But all contacts count, DX or not. I believe those that entered had a great time and look forward to next year. We need to encourage those that we make contacts with to enter a log of contacts. Some may not be subscribers and feel that they should not send them in for that reason. All entries are welcome.

Rank	CALL	MILES	POINTS
1	KA9UVY	10,577	21,154
2	N9XHU	4,630	9,260
3	NR8TV	3,905	7,810
4	KA9EGM	3,648	7,296
5	W8ILC	2,082	4,164
6	K9SM	1,851	3,702
7	WU8O	1,792	3,646
8	K9IDQ	75	150

KA9UVY

Here are my station particulars and soapbox comments:

Transmitter: Catel Agile Modulator into a Blonder Tongue agile processor driving a Down East Microwave Prototype amp (SAU82L) into a K2RIW 2x 4cx250b amp for a final output of 125 watts avg.

Receiver: PC Electronics synthesized downconverter (70Mhz if) with ARR preamps for input and 70 Mhz output. selectable bandpass SAW filter into a Samsung 13" color set and an IC706MK2G for carrier detect and antenna alignment.
All TX/RX switching done with Tohtsu CZX3500z relay

Antenna system: 4 Directive Systems DSFO25ATV's @ 130 feet agl fed with Andrew 7/8" Heliax.

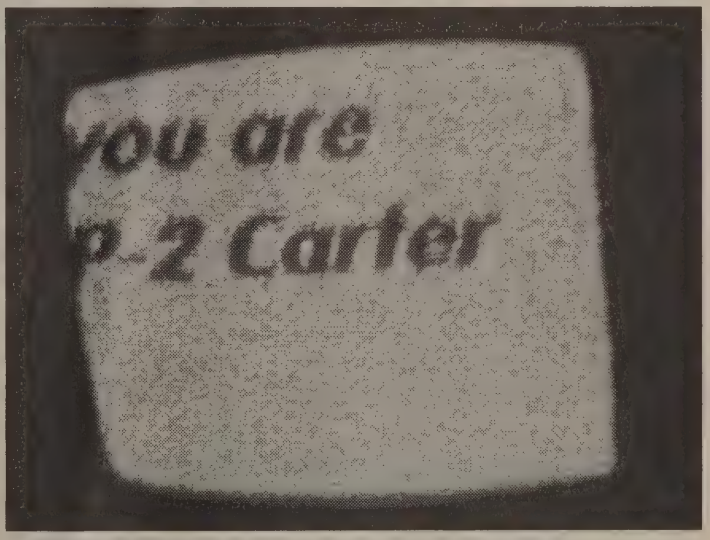
Soapbox: I found the band conditions to be very poor this year with no real long haul Tropo events. Most openings were short duration,(less than a day). I did have several Triple contacts this year and I believe it was due to the new antenna system installed in mid June. I also had a setback when a 100 Mph storm tore through the area in late July and took with it my 65 foot tower, home to my 144 Mhz and 23 CM antennas. Most coordination from that point on was carried out through relays and or the internet ATV Activity log.

This is the first time I have submitted a pure 70cm log and I hope the last. I still plan on getting the new 23cm antenna and 33cm antennas up and running before winter.

Some of the most exciting contacts I had this year were with N9ABR EN51ge 203 miles,running a barefoot PCE 20 watt Xcvr with his antenna only 35 feet agl. and W8ILC EM79wu 277 miles also running a barefoot PC Electronics Xcvr with his antenna only up 35 feet!

I worked only 6 states this year and the best DX was a tie with KC8LMI and KV8X both in Michigan.

73, Bob - KA9UVY



ATV contact

Hi Bob,

Here are a couple pix from our contact.

I hope to get the antenna on my hilltop (about 20 miles south of here) 15' tower before contest ends. Will let you know. Great making contact with you. That was my goal from here at Lake Thunderbird. If you aim at Putnam, IL, probably between Henry

KA9UVY EM58NG HOME

Call	rpt snt	rpt rec'v	UTC	DATE	FREQ	GRID	MILES	POINTS	
N9TWH	P5	P4	0:57	6/1/2006	439	EM57MT	31	62	
W9TZB	P5	P5	1:17	6/1/2006	439	EM58NH	2	4	
K9KKL	P1	P1	1:34	6/1/2006	439	EM59DS	112	224	
N9XHU	P2	P1	1:37	6/1/2006	439	EM59ET	113	226	
KA9EGM	P3	P3	2:28	6/3/2006	439	EM58KM	21	42	
K9SM	P4	P4	3:27	6/3/2006	439	EM59EE	75	150	
WA9IZV	P5	P4	10:25	6/3/2006	439	EM58TJ	28	56	
AA9MY	P3	P3	12:22	6/3/2006	439	EN50FM	159	318	
K0PFX	P3	P4	12:45	6/3/2006	439	EM48SR	91	182	
K4NQV	P1	P1	12:00	6/5/2006	439	EM66SW	161	322	
W4HTB	P2	P2	12:00	6/8/2006	439	EM66TX	163	326	
N9AZZ	P4	P4	4:13	6/10/2006	439	EM57MV	26	52	
K4VXP	P3	P4	11:57	6/10/2006	439	EM77HI	179	358	
N9UQD	P3	P4	12:35	6/10/2006	439	EM58QI	14	28	
KB9WLM	P3	P2	12:50	6/10/2006	439	EN4OXN	169	338	
W9NTP	P3	P3	11:51	6/14/2006	439	EM79EL	194	388	
W8ZCF	P1	P1	12:04	6/14/2006	439	EM79TB	249	498	
KA9JJS	P4	P4	1:19	6/30/2006	439	EM58NH	2	4	
N9XHU	P4	P3	2:08	7/1/2006	439	EM59ET	113	226	
K9KKL	P4	P5	2:09	7/1/2006	439	EM59DS	112	224	
KB9WLM	P5	P5	3:50	7/1/2006	439	EN40XN	169	338	
K9KLM	P1	P1	10:55	7/1/2006	439	EM79FE	190	380	
W4HTB	P3	P4	11:58	7/1/2006	439	EM66TX	163	326	
KC4WFN	P2	P3	12:07	7/1/2006	439	EM67SA	158	316	
K4VXP	P4	P5	12:14	7/1/2006	439	EM77HI	179	358	
K9SM	P5	P5	12:32	7/1/2006	439	EM59EE	75	150	
AA9MY	P2	P2	14:01	7/1/2006	439	EN50FM	159	318	
K0PFX	P3	P5	5:00	7/2/2006	439	EM48SR	91	182	
KA8MID	P2	P1	10:14	7/2/2006	439	EM89IC	307	614	
NR8TV	P2	P3	10:19	7/2/2006	439	EM89HH	305	610	
W9NTP	P2	P3	11:28	7/2/2006	439	EM79EL	194	388	
W8RVH	P2	P1	12:02	7/2/2006	439	EM79XW	284	568	
K4NQV	P2	P3	12:17	7/2/2006	439	EM66SW	161	322	
W0DQY	P4	P5	12:20	7/6/2006	439	EM48RS	96	192	
N0LK	P3	P4	12:44	7/6/2006	439	EM48RS	96	192	
W9ZIH	P4	P3	12:30	7/7/2006	439	EN51NW	252	504	
KC8LMI	P1	P1	13:10	7/8/2006	439	EN72TJ	370	740	
KD9SG	P4	P3	4:17	7/15/2006	439	EM58BS	64	128	
KB9PWQ	P3	P3	5:08	7/16/2006	439	EN61CX	262	524	
NK9M	P2	P2	6:05	7/16/2006	439	EN51UP	234	468	
N9ABR	P2	P3	11:55	7/31/2006	439	EN51GE	203	406	
KV8X	P2	P3	13:42	7/31/2006	439	EN63UG	370	740	
K3SIW	P2	P3	13:57	7/31/2006	439	EN52TA	260	520	
N9GA	P3	P4	14:56	7/31/2006	439	EN40XN	169	338	
W4HTB	P3	P3	11:42	8/1/2006	439	EM66TX	163	326	
NR8TV	P2	P1	0:06	8/2/2006	439	EM89HH	305	610	
KC8LMI	P1	P1	0:20	8/4/2006	439	EN72TJ	370	740	
W8ZCF	P3	P5	12:00	8/4/2006	439	EM79TB	249	498	
W8ILC	P1	P2	12:05	8/4/2006	439	EM79WU	277	554	
W8RVH	P3	P1	12:03	8/4/2006	439	EM79XW	284	568	
K4NQV	P2	P3	12:15	8/4/2006	439	EM66SW	161	322	
KB9JGF	P2	P2	13:15	8/4/2006	439	EN70MB	243	486	
N9XHU	P1	P1	1:56	8/5/2006	439	EM59ET	113	226	
K4VXP	P1	P1	12:05	8/10/2006	439	EM77HI	179	358	
K0PFX	P3	P5	12:17	8/10/2006	439	EM48SR	91	182	
W9NTP	P4	P3	12:12	8/12/2006	439	EM79EL	194	388	
K9KKL	P2	P1	2:08	8/13/2006	439	EM59DS	112	224	
N9ZGE	P2	P1	2:46	8/13/2006	439	EM59DS	112	224	
K9SM	P3	P5	13:45	8/17/2006	439	EM59EE	75	150	
AA9MY	P1	P1	12:11	8/23/2006	439	EN50FM	159	318	
KB9PWQ	P3	P2	0:05	8/25/2006	439	EN61CX	262	524	
NK9M	P1	P1	5:19	8/27/2006	439	EN51UP	234	468	
KB9WLM	P1	P1	13:50	8/30/2006	439	EN40XN	169	338	
						TOTALS	10577	21154	

N9XHU EM59et HOME

Call	rpt snt	rpt rec'v	UTC	DATE	FREQ	GRID	MILES	POINTS	
K9KKL	P5	P5	1:32	6/1/2006	439.25	EM59ds	5	10	
KA9UVY	P2	P2	1:37	6/1/2006	439.25	EM58ng	114	228	
N9ZGE	P5	P5	1:44	6/1/2006	439.25	EM59ds	5	10	
KB9WLM	P2	P1	1:56	6/1/2006	439.25	EN40xn	56	112	
AA9MY	P5	P4	3:22	6/2/2006	439.25	EN50fn	52	104	
KA9EGM	P2	P2	13:37	6/2/2006	439.25	EM58lm	94	188	
K9SM	P5	P4	12:41	6/3/2006	439.25	EM59ee	43	86	
WA9IZV	P3	P1	12:59	6/3/2006	439.25	EM58tj	119	238	
W9TZB	P2	P2	13:01	6/3/2006	439.25	EM58nh	111	222	
WC9L	P3	P3	12:22	6/6/2006	439.25	EM58km	93	186	
W9ZIH	P1	P1	1:37	6/7/2006	439.25	EN51nw	152	304	
W9TZB	P1	P1	2:00	7/1/2006	439.25	EM58nh	111	222	
KA9EGM	P2	P2	2:05	7/1/2006	439.25	EM58lm	94	188	
KA9UVY	P4	P4	2:08	7/1/2006	439.25	EM58ng	114	228	
N9TWH	P1	P1	2:54	7/1/2006	439.25	EM57nt	144	288	
N9AZZ	P2	P2	3:55	7/1/2006	439.25	EM57mv	137	274	
W4HTB	P2	P2	12:01	7/1/2006	439.25	EM66tx	263	526	
N9GA	P2	P2	1:32	7/16/2006	439.25	EN40xn	56	112	
NK9M	P3	P3	3:43	7/17/2006	439.25	EN51up	145	290	
WC9L	P3	P2	13:37	7/17/2006	439.25	EM58km	93	186	
N9ABR	P1	P2	3:14	7/31/2006	439.25	EN51gf	98	196	
KA9EGM	P2	P1	12:31	8/1/2006	439.25	EM58lm	94	188	
KB9JGF	P2	P2	13:19	8/4/2006		EN70mb	248	496	
KA9UVY	P1	P1	1:56	8/5/2006		EM58ng	114	228	
NR8TV	P1	P1	12:46	8/5/2006		EM89hh	336	672	
WA9IZV	P2	P1	13:31	8/5/2006		EM58tj	119	238	
W9NTP	P3	P4	11:09	8/6/2006		EM79el	215	430	
W8ILC	P1	P1	2:17	8/7/2006		EM79wu	293	586	
K9KLM	P4	P4	11:48	8/8/2006		EM79fe	222	444	
W8ZCF	P1	P2	11:57	8/8/2006		EM79tb	286	572	
NK9M	P1	P2	20:11	8/8/2006		EN51up	145	290	
WC9L	P1	P1	2:04	8/10/2006		EM58km	93	186	
K0PFX	P2	P2	12:57	8/13/2006		EN48sr	87	174	
W4HTB	P2	P1	11:59	8/24/2006		EM66tx	263	526	
K9IDQ	P3	P5	3:01	8/29/2006		EM59bw	16	32	
						TOTALS	4630	9260	

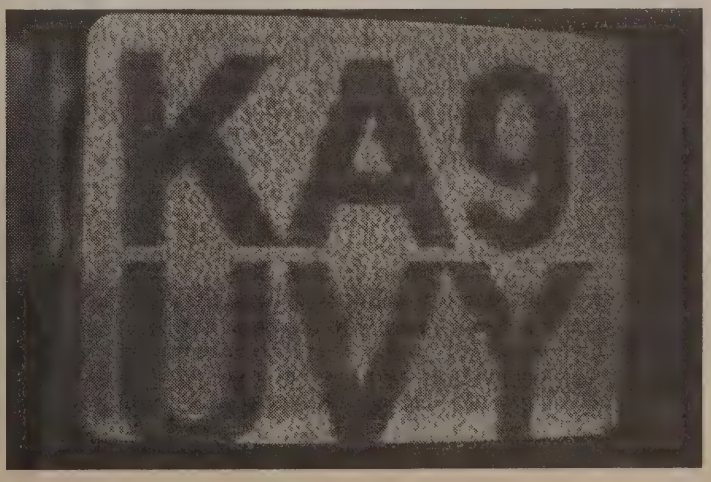
and Princeton: that would be me. Only on temporarily each time. Antenna was 35', and power was 20 Watt PEP, 10 watts with video. Best of luck in the contest.

N9ABR
Anheuser Busch Radio **N9ABR1@wmconnect.com**

Confirming 2 way ATV

Good afternoon Bob. Here's a photo of your video. July 31, 2006 at 09:43:00 hrs EDT on 439.25 MHz. Your my best DX so far. I'll have a QSL card to follow soon.

73 - Al Pepping - KV8X - **kv8x@comcast.net**



NR8TV EM89hh HOME

Call	rpt snt	rpt rec'v	UTC	DATE	FREQ	GRID	MILES	POINTS
KA8MID	P5	P5	10:34	6/3/2006	439.25	EM89ic	17	34
WU8O	P3	P4	0:19	6/5/2006	439.25	EN80ic	54	108
W8ILC	P2	P2	0:51	6/5/2006	439.25	EM79wq	45	90
W8RUH	P3	P4	1:52	6/5/2006	439.25	EM79xw	53	106
K8STV	P2	P2	13:18	6/11/2006	439.25	EM79ui	47	94
W9NTP	P5	P5	10:44	6/25/2006	439.25	EM79el	119	238
K9KLM	P5	P5	10:46	6/25/2006	439.25	EM79fe	115	230
NO8I	P4	P4	11:47	6/25/2006	439.25	EM79wq	45	90
KB8YMQ	P5	P5	12:03	6/25/2006	439.25	EN80ic	54	108
KB8SSH	P5	P5	12:05	6/25/2006	439.25	EN80ma	53	106
WB8LGA	P5	P5	12:26	6/25/2006	439.25	EN80oj	80	160
AA8XA	P4	P4	12:30	6/25/2006	439.25	EN80ma	53	106
KC8CRM	P1	P1	13:21	6/25/2006	439.25	EN82ll	218	436
KA9UVY	P2	P3	10:18	7/2/2006	439.25	EM58ng	304	608
K9KLM	P2	P3	10:49	7/2/2006	439.25	EM79fe	115	230
W4HTB	P1	P2	12:06	7/3/2006	439.25	EM66tx	229	458
K4VXP	P1	P2	12:08	7/3/2006	439.25	EM77hi	173	346
W8RXX	P1	P1	2:18	7/11/2008	439.25	EN80ne	66	132
WB8CJW	P4	P3	2:25	7/11/2006	439.25	EN80id	59	118
KC8LMI	P1	P3	1:31	7/16/2006	439.25	EN72tj	217	434
KB8OFF	P3	P3	1:35	7/24/2006	439.25	EM79wr	47	94
W9NTP	P4	P3	10:50	7/26/2006	439.25	EM79el	119	238
KA9UVY	P2	P1	0:08	8/2/2006	439.25	EM58ng	304	608
W9NTP	P2	P2	0:38	8/2/2006	439.25	EM79el	119	238
W4HTB	P2	P2	1:02	8/2/2006	439.25	EM66tx	229	458
KC8OVP	P3	P2	2:00	8/2/2006	439.25	EM89fd	15	30
N9XHU	P1	P1	12:42	8/5/2006	439.25	EM59et	333	666
K9KLM	P4	P3	11:03	8/6/2006	439.25	EM79fe	115	230
W4HTB	P1	P2	1:48	8/22/2006	439.25	EM66tx	229	458
K4VXP	P2	P2	1:53	8/22/2006	439.25	EM77hi	173	346
KA8LWR	P4	P2	3:00	8/27/2006	439.25	EN80nt	106	212
						TOTALS	3905	7810

KA9EGM EM58km HOME

Call	rpt snt	rpt rec'v	UTC	DATE	FREQ	GRID	MILES	POINTS
AA9MY	P1	P2	12:36	6/2/2006	439.25	EN50fm	139	278
K9KKL	P1	P1	12:42	6/2/2006	439.25	EM59ds	91	182
N9ZGE	P1	P1	12:50	6/2/2006	439.25	EM59ds	91	182
N9HXU	P2	P2	13:37	6/2/2006	439.25	EM59et	93	186
KA9UVY	P3	P3	2:28	6/2/2006	439.25	EM58ng	21	42
W9TZB	P2	P2	2:32	6/2/2006	439.25	EM58nh	19	38
K9SM	P3	P3	3:30	6/2/2006	439.25	EM59ee	46	92
K0PFX	P1	P3	12:50	6/3/2006	439.25	EM48sr	73	146
KB9WLM	P2	P2	13:43	6/4/2006	439.25	EN40xn	149	298
WA9IZV	P2	P2	14:12	6/4/2006	439.25	EM58tj	41	82
N9UQD	P1	P2	12:48	6/24/2006	439.25	EM58qi	29	58
N9AZZ	P2	P2	2:22	6/26/2006	439.25	EM57mv	44	88
N9TWA	P2	P2	2:13	6/28/2006	439.25	EM57mv	44	88
KC9BIE	P2	P2	2:19	6/28/2006	439.25	EM58ng	19	38
N9XHU	P2	P2	2:05	7/1/2006	439.25	EM59et	93	186
K9KKL	P3	P4	2:10	7/1/2006	439.25	EM59ds	91	182
KB9WLM	P5	P5	2:15	7/1/2006	439.25	EN40xn	149	298
AA9MY	P1	P1	14:05	7/1/2006	439.25	EN50fm	140	280
W9ZIH	P3	P3	12:47	7/7/2006	439.25	EM51nl	236	472
W4HTB	P1	P1	12:15	7/20/2006	439.25	EM66tx	184	368
K4VXP	P1	P0	12:20	7/20/2006	439.25	EM77ai	220	440
N0LK	P3	P3	12:50	7/20/2006	439.25	EM48rr	78	156
W0DQY	P2	P2	12:30	7/21/2006	439.25	EM48rs	78	156
N9ZGE	P5	P5	12:40	7/31/2006	439.25	EM59ds	91	182
N9ABR	P2	P2	12:45	7/31/2006	439.25	EN51ge	184	368
KB9PWQ	P1	P1	1:10	7/31/2006	439.25	EN61cx	248	496
K3SIW/9	P2	P2	2:20	7/31/2006	439.25	EN52ta	244	488
N9GA	P2	P2	2:57	7/31/2006	439.25	EN40xn	149	298
N9XHU	P1	P1	12:31	8/1/2006	439.25	FM59et	93	186
N9ZGE	P2	P1	2:13	8/13/2006	439.25	EM59ds	91	182
K9KKL	P1	P1	2:08	8/18/2006	439.25	EM59ds	91	182
AA9MY	P1	P1	1:51	8/23/2006	439.25	EN50fm	140	280
KB9WLM	P1	P1	1:15	8/31/2006	439.25	EN40xn	149	298
						TOTALS	3648	7296

W8ILC EM79wu HOME

Call	rpt snt	rpt rec'v	UTC	DATE	FREQ	GRID	MILES	POINTS	
K8BSM	P3	P3	1:15	6/1/2006	439.25	EM79wq	12	24	
WU8O	P3	P1	3:05	6/1/2006	439.25	EN80ic	47	94	
NO8I	P5	P5	11:25	6/1/2006	439.25	EM79wu	2	4	
W8RUH	P5	P5	12:00	6/1/2006	439.25	EM79xw	9	18	
NR8TV	P2	P2	0:51	6/5/2006	439.25	EM89hh	52	104	
KB9JGF	P3	P1	1:50	6/8/2006	439.25	EN70mb	45	90	
KB8OFF	P5	P5	2:10	6/8/2006	439.25	EM79wr	7	14	
KA8HBT	P3	P3	12:55	6/11/2006	439.25	EM79us	8	16	
W8ZCF	P4	P4	11:40	6/12/2006	439.25	EM79tb	54	108	
W9NTP	P1	P1	11:40	6/12/2006	439.25	EM79el	86	172	
K9KLM	P3	P2	11:24	6/17/2006	439.25	EM79fe	90	180	
W8GUC	P5	P5	1:35	6/21/2006	439.25	EM79vr	5	10	
W9NTP	P4	P3	13:00	7/16/2006	439.25	EM79el	86	172	
KC8LMI	P3	P1	1:54	7/17/2006	439.25	EN72tj	177	354	
K9KLM	P3	P2	10:50	7/17/2006	439.25	EM79fe	90	180	
K3SIW/9	P2	P2	3:00	7/19/2006	439.25	EN52ta	267	534	
KA9UVY	P2	P1	12:05	8/4/2006	439.25	EM58ng	276	552	
W9NTP	P2	P2	12:40	8/6/2006	439.25	EN79el	86	172	
N9XHU	P1	P1	2:17	8/7/2006	439.25	EN79et	291	582	
KA8MID	P2	P2	13:00	8/9/2006	439.25	EM89ic	71	142	
K8GCS	P3	P5	1:30	8/10/2006	439.25	EM79wq	12	24	
WB8LGA	P5	P5	13:00	8/15/2006	439.25	EN80oj	80	160	
KA8LWR	P5	P5	13:05	8/15/2006	439.25	EN80mt	90	180	
W8RRF	P4	P4	13:35	8/15/2006	439.25	EM80ot	71	142	
WA8RMC	P4	P4	2:00	8/30/2006	439.25	EN80nc	68	136	
						TOTALS	2082	4164	

K9SM EM59ee HOME

Call	rpt snt	rpt rec'v	UTC	DATE	FREQ	GRID	MILES	POINTS	
KA9UVY	P4	P4	3:30	6/3/2006	439.25	EM58ng	75	150	
KA9EGN	P3	P3	3:30	6/3/2006	439.25	EM58km	53	106	
K0PFX	P3	P3	12:41	6/3/2006	439.25	EM48sr	55	110	
N9XHU	P5	P5	12:43	6/3/2006	439.25	EM59et	43	86	
AA9MY	P4	P4	12:46	6/3/2006	439.25	EN50fm	92	184	
WA9IZV	P3	P3	13:00	6/3/2006	439.25	EM58tj	82	164	
W9TZB	P2	P3	13:01	6/5/2006	439.25	EM58nh	73	146	
KB9WLM	P5	P3	12:49	6/6/2006	439.25	EN40xn	97	194	
WC9L	P2	P2	12:33	6/7/2006	439.25	EM58km	53	106	
W9ZIH	P1	P1	1:43	6/20/2006	439.25	EN51nl	191	382	
N9ABR	P2	P2	13:28	6/25/2006	439.25	EN51ge	138	276	
K9KKL	P3	P2	2:15	6/28/2006	439.25	EM59os	39	78	
KC9BIE/9	P2	P2	13:35	7/1/2006	439.25	EM58ng	75	150	
KA9UVY	P5	P5	12:32	7/1/2006	439.25	EM58ng	75	150	
KB9WLM	P5	P1	12:43	7/6/2006	439.25	EN40xn	97	194	
W0OQY	P3	P4	13:09	7/6/2006	439.25	EM48rs	57	114	
N0LK	P5	P3	13:10	7/6/2006	439.25	EM48al	58	116	
N9GA	P4	P3	1:57	7/17/2006	439.25	EN40xn	97	194	
KA9UVY	P5	P3	13:43	8/17/2006	439.25	EM58ng	75	150	
AA9MY	P2	P2	3:24	8/25/2006	439.25	EN50fm	92	184	
W4HTB	P3	P3	12:37	8/25/2006	439.25	EM66tx	234	468	
						TOTALS	1851	3702	

N9XHU

2 Meters
YAESU all mode transceiver FT 736R.
MIRAGE B2516G, 160 Watts amplifier.
LMR 600 feed line.
CUSHCRAFT A148-20T vertical and horizontal Yagi at 55 feet.

70 CM
RECEIVER
P. C. Electronics down converter TVC4G. Preamp 16db. 2 SHARP 13 inch color cable ready televisions.
2 ZENITH 9 inch color cable ready television.
1 EMERSON 5 inch color set hooked to Bandpass Filter.
Antenna M2 440-21 ATV Yagi at 55 feet.

K9IDQ EM59bw HOME								
Call	rpt snt	rpt rec'v	UTC	DATE	FREQ	GRID	MILES	POINTS
N9XHU	P4	P3	3:01	8/29/2006	439.25	EM59et	16	32
K9KKL	P5	P5	1:22	8/30/2006	439.25	EM59ds	15	30
KB9WLM	P4+	P1+	12:33	8/30/2006	439.25	EN40xn	44	88
						TOTALS	75	150

LMR 600 feed line.

TRANSMITTER
Homebrew B. T. Bryant (K9KKL)
Blonder Tongue AM 60-550 Agile modulator with a P. C. Electronics 20 Watt brick. 10 Watts with video.
Homebrew tube amplifier 4CX250B 100 Watts with video.
Built by Bill Bryant (K9KKL).
Computer driven slide with call. Black on white background.
Antenna M2 440-21 ATV Yagi at 55 feet.
LMR 600 feed line.

ACCESSORIES
SHARP VC-A410 VHS tape player and recorder.
HYUNDAI CO1120 auto electronic switcher.
RCA Small Wonder cam recorder.

Leonard McWhorter, N9XHU
mcwhortera@insightbb.com

W8ILC

Equipment
TC70-20S (P.C. Electronics) - 20 watts
88 element J beam 439 MHz at 35 feet
Kenwood 241 for 144 MHz
10 element Cushcraft 144

First ATV contest for me.

Ron Moorefield - W8ILC - **w8ilc@aol.com**

K9SM

Three states worked

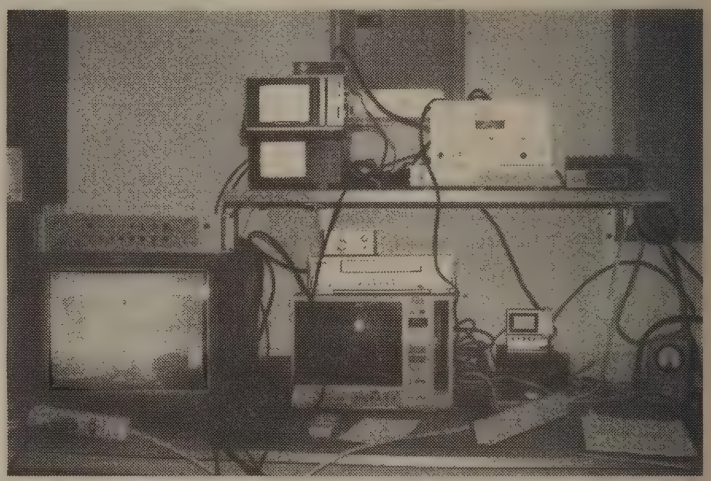
Equipment:
PC TC-20S Transceiver
Teletec 100 watt linear
C-3 39 element beam - 60 feet

Scott Millick - K9SM = **smillick@wamusa.com**

K9IDQ

Here is probably the shortest ATV Log that is being submitted to you.

It is always a pleasure to receive Amateur Television quarterly and especially see the improvements and stories you've been adding. THANK YOU for the excellent effort. Also, special thanks to your lovely XYL for her contributions while filing Illinois reports in QST magazine. You guys are great. It's also interesting to read about your efforts with ATV repeaters.



K9IDQ A-T-V wall of the shack

It is a low power homebrew ATV Transceiver powered by a 12 volt power supply that runs some of the other ATV converters and a Mirage pre-amp.

The rig only puts out around a watt or so and drives a Mirage (10watt-drive) D1010 RF amp to about 15 watts.

The video camera (between two monitors), currently on the desk, is a Panasonic digital 5010 powered by the remote power unit atop the larger TV.

Because of other time-consuming events, the PC Electronic TVC4 ATV downconverter or the Bestlink Corp. TOS C070 ATV converter were not hooked up.

The two meter rig with a 100 watt Mirage RF amp cut back to around 70 watts output is powered by an old 12 volt repeater power supply and the ATV Mirage RF amp is powered by a second old 12 volt repeater power supply.

The ATV beam is up nearly 70-feet up on a Rohn 25 tower, in the woods, with a two meter beam and a 5-band junior beam for DX. The 3/4" 70 ohm coax run is about 300-feet.

Ironically, the TV camera, Television monitors, a lot of the cables and even a bird watt meter have come from the Illinois

Call: WU8O Grid: EN80ic Class: Home

STATION WORKED	REPORT SENT	REPORT RECEIVED	UTC	DATE	FREQUENCY	GRID SQ	MILES	POINTS
W8RVH	P5	P5	3:02	06/01/06	439.25	EM79xw	41	82
W8ILC	P1	P4	3:07	06/01/06	439.25	EM79wu	47	94
W9NTP	P1	P1	11:20	06/01/06	439.25	EM79el	129	258
W8RRF	P3	P3	0:00	06/02/06	439.25	EM89ot	35	70
WB8DZW	P5	P4	0:25	06/02/06	439.25	EN80ka	12	24
N8LRG	P3	P5	0:42	06/02/06	439.25	EM89kv	18	36
KB8YMQ	P5	P5	0:46	06/02/06	439.25	EN80ic	2	2
KB8YMQ	P5	P5	0:47	06/02/06	2433	EN80ic	2	20
KA8MID	P1	P2	1:02	06/02/06	439.25	EM89ic	69	138
W8ZCF	P1	P2	12:20	06/03/06	439.25	EM79tb	91	182
WB8LGA	P3	P4	23:25	06/04/06	439.25	EN80oj	34	68
NR8TV	P3	P3	0:19	06/05/06	439.25	EM89hh	55	110
KB8SSH	P4	P4	1:01	06/05/06	439.25	EN80ma	20	40
KA8LWR	P3	P4	2:10	06/16/06	439.25	EN80mt	51	102
NO8I	P5	P3	5:23	06/25/06	439.25	EM79wu	47	94
WB8CJW	P5	P5	6:14	06/25/06	439.25	EN80ke	12	24
WB8CJW	P5	P5	6:25	06/25/06	1280	EN80ke	12	72
KB8GHW	P2	P4	0:47	07/12/06	439.25	EN80pa	33	66
W8RXX	P3	P4	2:13	07/12/06	439.25	EN80ne	24	48
KC8LMI	P1	P1	13:28	07/15/06	439.25	EN72tj	166	332
W9ZIH	P4	P4	13:44	07/15/06	439.25	EN51nw	315	630
K9KLM	P1	P2	11:49	07/16/06	439.25	EM79fe	135	270
KB9JGF	P4	P5	12:46	07/16/06	439.25	EN70mb	88	176
W9NTP	P1	P4	0:26	08/02/06	439.25	EM79el	129	258
KC8LMI	P1	P2	22:22	08/03/06	439.25	EN72tj	166	332
KC8WRI	P2	P3	2:34	08/30/06	439.25	EM89kv	18	36
AA8XA	P1	P4	21:13	08/30/06	439.25	EN80ma	20	40
W8DMR	P2	P3	21:44	08/30/06	439.25	EM89mx	21	42

Total Miles 1792 Total Points 3646

state surplus auction sales over the past 30 years. Even the 3/4 inch RF coax, targeted for computer usage, is from the state auction.

Ben Kiningham - K9IDQ

WU8O

Tom Walter
15704 SR 161 w
Plain City, Ohio 43064
EN80ic

Equipment:

2M
Yaesu FT-847 driving AM-6154 to 450+ watts into pair of Cushcraft 10 element, dual polarization yagis mounted at 54ft.

70cm
PC Electronics exciter and down converter. AM-6154 amplifier with 4CX400A producing 300 watts average.
LNA shack mounted preamp. Pair of KLM 27 element log periodics mounted at 57ft.

23cm
Transmitter and receiver is from CommTech. Amplifier is a Down East Microwave producing 24 watts into a pair of F9FT 23 element yagis mounted at 60ft.

13cm
TX and RX are also CommTech. Amplifier is a Spectrian running at 20 watts but is capable of running over 100 watts. Antenna is a 65 element W1MO mounted at 50ft.

Despite a new, taller tower, shorter coax runs and double the antennas, I still had a very short log this year. One contact was really fun though. NO8I was a field day station running only 10 watts into a small antenna only 15 feet high. He was P5 47 miles away! He could see me P3 running only 750mw.

Recap

Interesting that the only one with contacts on bands other than 440 is WU8O. Around me and toward Chicago, I hear them working 1.2 GHz a lot. They could really be racking up the points.

We need to work on those that are listed to turn in contest forms as well as those that did. And, while band openings are fun and do help get more points, a good contest can be had by just turning on the equipment and making daily tries!

I hope I did not make too many mistakes retyping the entries into the spread sheets so they would look nice. Thanks to those that sent them in that way.

If I was smart, I could provide a standard spread sheet to use.....

NearSys 06C - My Launch with the Central Nebraska Near Space Program (CNNSP)

By Paul Verhage - KD4STH Email: Paul.Verhage@boiseschools.org
5720 3rd Ave.
Nampa, ID 83686

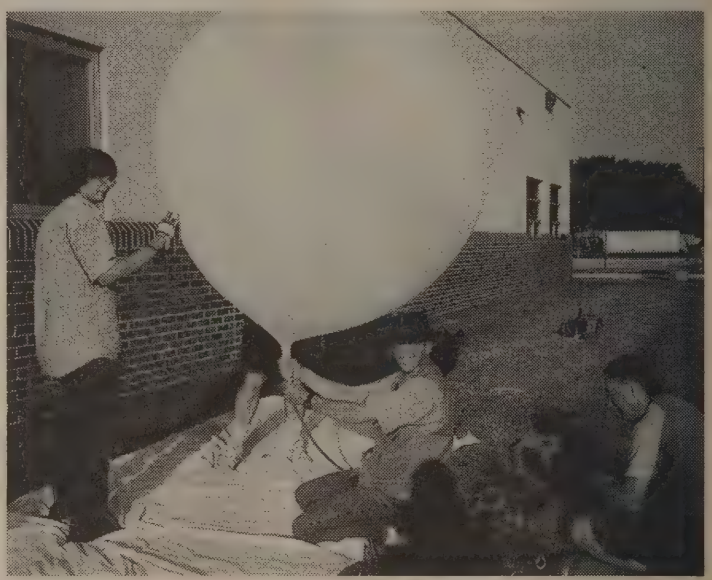
One happy near space cadet. It's always nice to recover your module after a near space mission.

I've been trying to do a near space launch with CNNSP since before Spring 2006. At first, it looked like it was going to happen during spring break. But a week before the launch, the weather decided not to cooperate and the launch was cancelled. And it's a good thing, Grand Island, the home of CNNSP, received 16 inches of snow. During my summer vacation we were finally able to schedule a launch.

It turned out to be a very busy week for me. On Monday and Tuesday I taught a BalloonSat class for the Idaho Department of Aeronautics' ACE Academy. Early Wednesday we launched and chased their BalloonSats. After recovery of the BalloonSats I drove home and finished packing my near space gear along and some camping gear (I camped a little on this trip to save some money). Before noon I left for Pocatello, a town on the other side of Idaho. There I meet with the Pocatello astronomy club and gave a presentation on the Mars Rovers. As one half of the JPL Solar System Ambassadors in Idaho, I take every opportunity to education the public about JPL's space missions.

I spent the next day and a half traveling to Grand Island. When I arrived Friday afternoon I called Roger Hammond, KC0MWM, the founder of CNNSP, to let him know I was in town. I met his near space crew for dinner at an Italian buffet and we looked at the weather predictions for the next morning. According to the predicted surface winds, a launch site at the local county park was going to be the prefect launch site. After checking the selected launch site out, I headed back to the motel to prepare for the next day's launch.

The next morning was a bit windier than we would like, so the launch site was moved to a high school. By filling the balloon next to a building, we were able to protect the balloon from the worst of the wind. The balloon still blew around a little, but not enough to endanger it.



Filling Balloon

On NearSys 06C, I launched a single tracking capsule that carried a downward pointing digital camera. Roger flew a capsule made from an insulating cooler bag and carried a second tracker and a digital camera capable of recording video. Below both of our modules was an Idaho cluster bomb that I'll explain shortly.

March to launch

After successfully filling the balloon, we marched out into the parking lot to launch our near spacecraft.

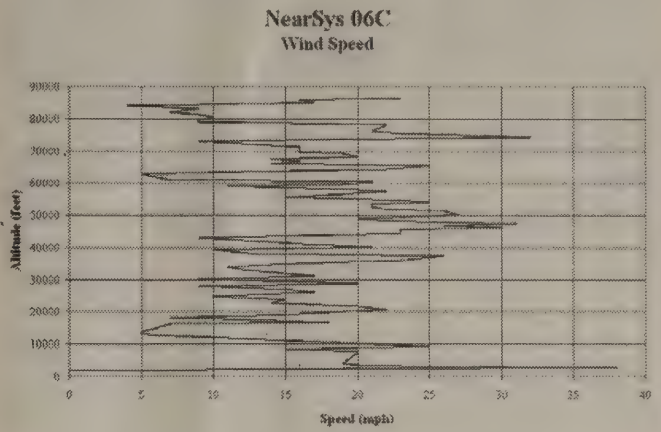
The chase was pretty leisurely, since the near spacecraft was predicted to land close to the launch site. So instead of driving immediately to the predicted recovery site, we pulled into a gas station and refreshed ourselves. This is one of the benefits of launching within a high pressure system, you don't have to drive far and have time to shoot the breeze.

Chase Crew: From left to right, Caleb Roberts, Jeff Richardson (K0JLR), Jim Johnston (KK0JJ), Roger Hammond (KC0MWM), and Paul Verhage (KD4STH)

At an altitude of 87,576 feet, the balloon burst and we went into high gear. Several times during the descent we were able to see the near spacecraft overhead with its beautifully deployed parachute. The recovery site was only 11.9 miles away from the launch site. It was a corn field with stalks about shoulder high. To make the recovery efficient and to limit the damage we would cause to the corn, one of the chase crew climbed on top of a truck to look over the corn field. From his vantage point, he could tell the rest of us which row to should walk down.

Jeff pulling the parachute off the corn stalks

The reason this flight was so short (it's my second shortest flight to date) is that central Nebraska was in a high pressure system. The winds aloft were weak and disorganized. As you can see in my chart, the winds hardly broke 25 mph and there was no jet stream at the typical 40,000 feet altitude.



My camera took several interesting pictures. A benefit of using a digital camera with a 128 Mb flash card is that I can get lots of pictures and find something interesting.

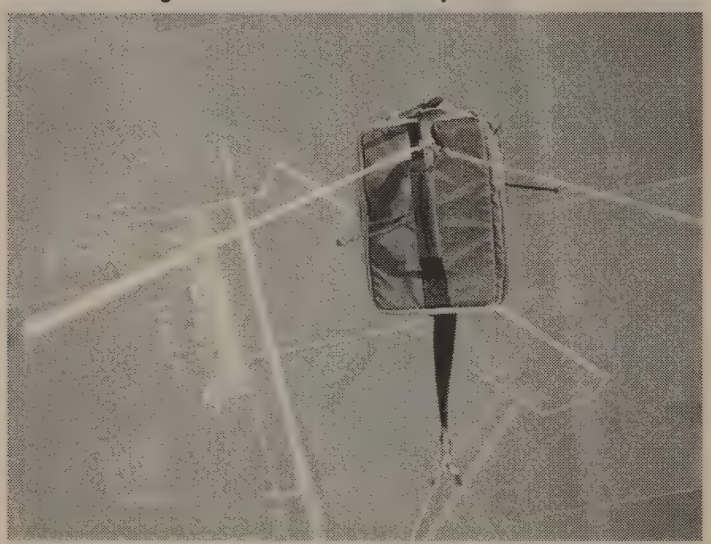
Just after lift off, the camera recorded several of the launch crew looking up at the near spacecraft

TELL YOUR FRIENDS

SUBSCRIBE TO

ATVQ!

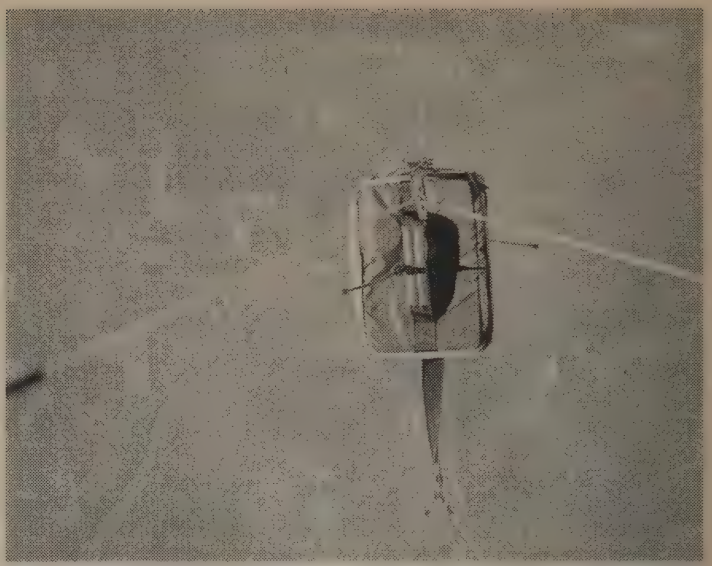
The next image was taken as the near spacecraft ascended over homes in Grand Island. Hey, I can see your house from up here.



An airplane's eye view of the Grand Island municipal airport

Photo Top Right

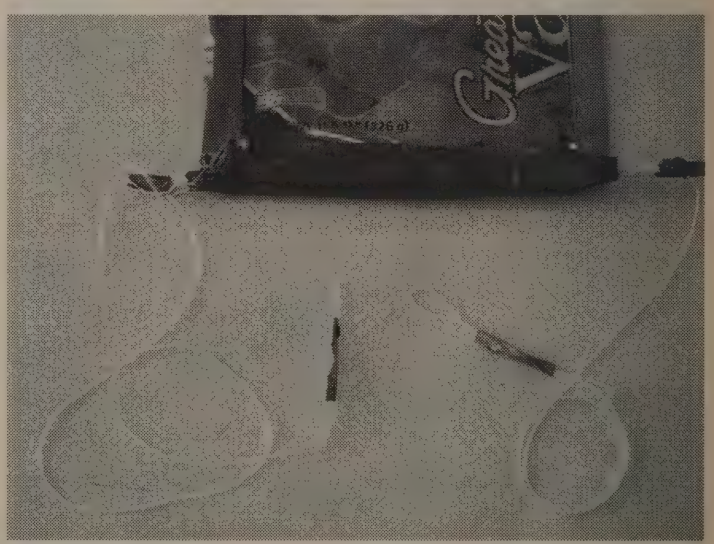
This image was taken around an altitude of 87,000 feet. The Platte River flows through the center of the scene and Grand Island is at the bottom.



So NearSys 06B was a great flight and I had a lot of fun meeting everyone in CNNSP. I'm looking forward to doing this again next year. If the readers of ATV Quarterly are interested in doing a near space launch, contact me and we'll see what we can work out for summer 2007 when I plan to travel the country launching near spacecraft.

The Idaho Cluster Bomb

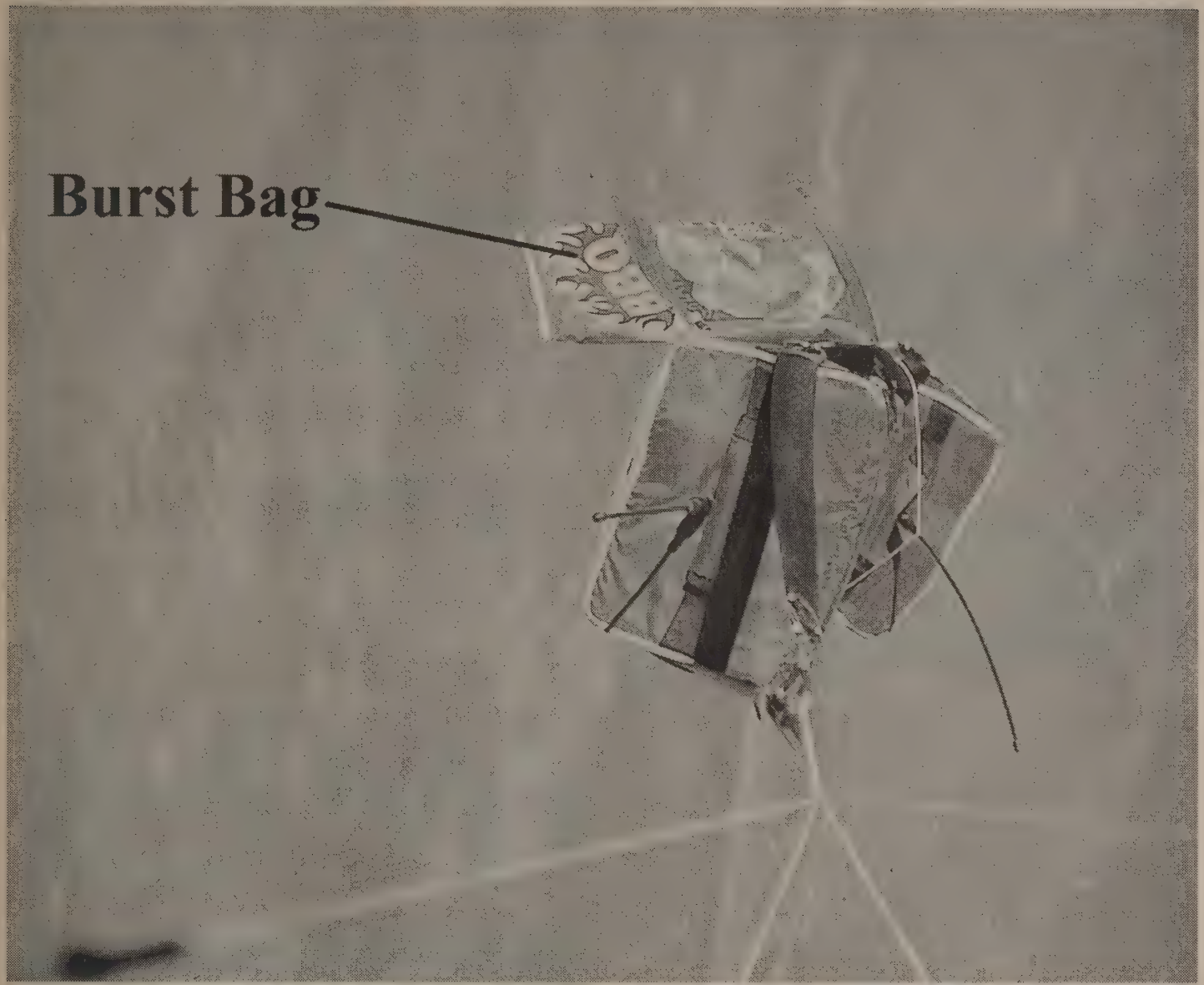
Have you ever noticed that a sealed bag of potato chips expands as you carry it up a mountain? Have you ever wondered just how much pressure a bag of chips can withstand before bursting? To find out, I use duct tape and a dowel to reinforce the top seam of a bag of chips. The dowel prevents the bag from sagging and creates a convenient attachment interface.



The sealed bottom seam of a bag of potato chips.

The bag is then tethered to a near spacecraft and left to dangle during a mission. And miracle of miracles, the bag comes back from its mission empty of chips. I call this the Idaho Cluster Bomb because Idaho is famous for potatoes and the chip bag acts like a casing for mini bomblets. But instead of exploding

violently, the bag's bottom seam bursts, spilling the chips. So somewhere in Grand Island, Nebraska, it rained potato chips on July 1st. I hope they were having a picnic.



We can see the burst bag of chips during ascent. Note that the bag is empty at this point.

I'm producing short videos on each of my near space flights this year. You can see them at **www.youtube.com**. Search on the terms, NEAR SPACE and you'll find my videos listed. I name them after the mission, or NearSys 06A, NearSys 06B, etc.

ATVQ

Thanks

Gene - Thanks very much for the ad and the prize materials for our convention. The magazines went fast, and the books were great hourly prizes.

We had a good time. I was pretty busy with doing other things and did not get a chance to set up any ATV stuff.

Still want to do that for the next year's convention. Maybe with a little preparation I can set something up. Unfortunately we're pretty far away from the nearest ATV repeaters (Pittsburgh, PA and Columbus, OH).

Coming up in 2008 will be our 50th Annual State ARRL Convention. We may be able to make it the Roanoke Division Convention.

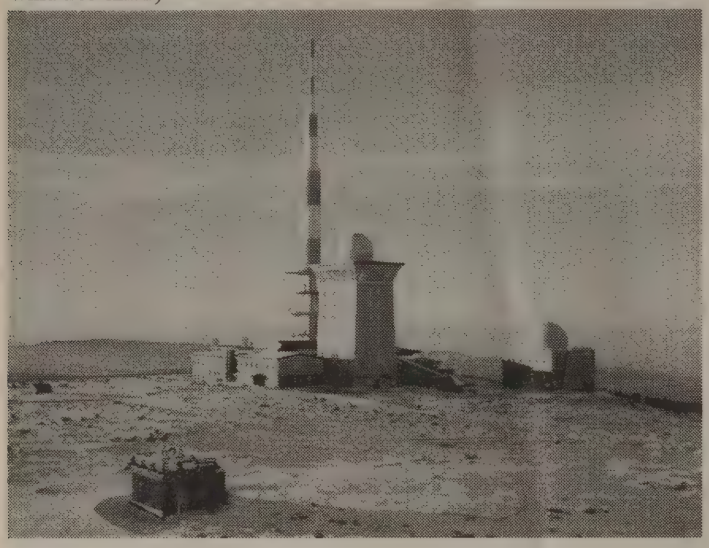
Once again, thanks, and we'll hopefully see y'all at Dayton next year!

73 - Bob WA8YCD - Morgantown WV

Developments at DB0HEX

By Iwo Schulz - DG0CBP
Translations: Klaus Kramer, DL4KCK Email: DL4KCK@t-online.de

QTH: JO51HT (Brocken mountain, northern Germany, 1142m ASL, 176 snow days a year, min. temp. -28 degr., max. temp. +28 degr., max. wind 263 km/h)



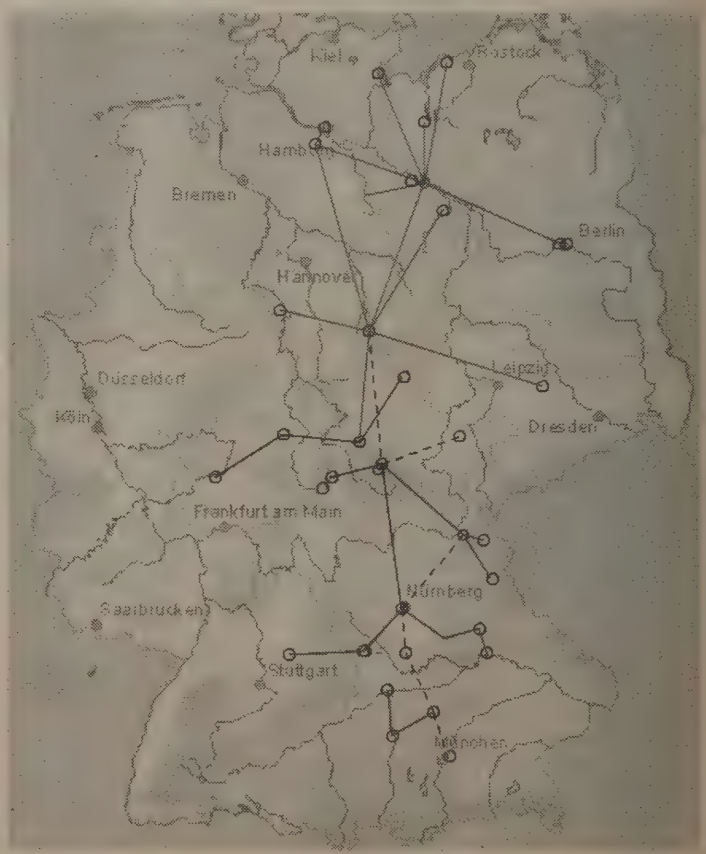
First try

In August 1993 DH6CBI(sk), DG0CBP and DM2DXG succeeded in transferring an ATV signal from Bensburg via Brocken mountain to Halberstadt. This way they proved that the kilowatt power from commercial transmitters on the site would not affect the transfer. Another try with a 500 mW beacon gave insight to the possible range for a longer time. On December 20th 1993 the first real QSO took place from Ilsenburg via the now automated test repeater to Halberstadt. The next day normal operation began with an input on 23 cm only. In January 1994 a 13 cm input was added, but the planned frequency 2329 MHz proved not suitable because of QRM by the 4. harmonic from a TV transmitter on channel 34. By now the input QRG is 2380 MHz, and the 23 cm input frequency has been handed over to ATV repeater DB0TVI.

Our first ATV meeting with more than 50 DB0HEX users formed on September 24th 1994. The panoramic views from Brocken mountain transmitted besides the test pattern grew in popularity, and until end of 1995 more than 100 stations had worked via the repeater. ODX on 23 cm was 286 km and on 13 cm about 223 km. In April 1996 a 10 GHz ATV test signal was transmitted with 4 mW into a 40 cm dish over 20 km range, giving noise free colour video. July 1996 the repeater had to shut down because of rebuilding at the site. On a new location near by a beacon test transmission started in November, and with the third anniversary the new installation was running. ODX on 13 cm expanded to 286 km in January 1997, mostly due to the antenna height now 60 m above the former site.

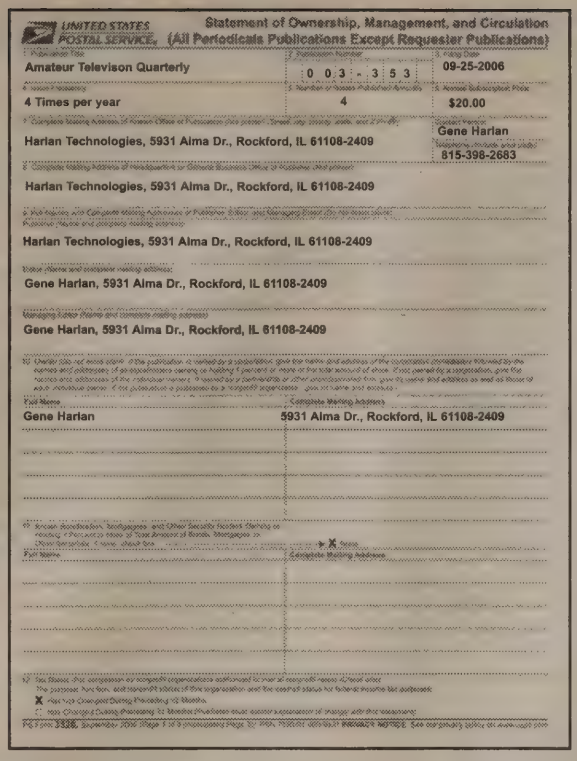
On January 10th 1997 a teletext test began called "Hexen Text". DM2DXG is busily keeping it current with technical information on repeaters and beacons, with bulletins and news also on commercial satellite TV equipment. In October an ATV beacon on 10240 MHz started, to be completed by an input receiver on 10420 MHz. A CW beacon on 10368,910 MHz was added and later another one on 24192,910 MHz. Since spring 1998 the video camera on the roof of the weather station is running again, it has a heated casing mounted on a swing-head. It`s picture is transmitted to the repeater site near by and inserted to the sequence of test patterns. At the same time the 10 GHz output frequency has been changed to 10180 MHz because of interference at the receiver inputs of DB0TVH users in Hannover. The 10 GHz input is finally working since June 8th 1999, after difficulties with interference by the Morse beacon on 10368,910 and the ATV output on 10180 MHz have been resolved with a special filter.

Since 2001 talks began with amateurs in Hamburg and in the Schneekopf/Hermsdorf/Nuremberg area on linking the ATV repeaters. This needed an inter-step in northern direction as the distance between Brocken mountain and Hamburg is too long for a solid link. At a meeting in Lenzen/Elbe the "Hoehbeck" tower near Gatow was chosen, together with analog equipment for the link. An additional option was linking to Berlin, as in GDR times (before the break of the wall) this tower enabled a commercial radio and TV link between Berlin and western Germany. In the south the OMs will erect a repeater DB0THA on the "Schneekopf" mountain as an inter-step.



In spring 2003 a new (home-made) 8/8 video/audio matrix with remote

control was set to operation, and first digital ATV test transmissions on 23 cm began with prototype components developed by DF9IC and the ADACOM group. As a parallel activity of analog and digital transmitters in the same band was impractical, in 2004 DB0HEX was the first german ATV repeater with only a digital output. The DATV transmitter filled a 19 inch rack unit including a 3 Watt rf output stage. Later on we added a 15 Watt PA in a separate 19 inch unit. After this the digital output range was equal to the earlier analog one. Now with the great help of amateurs in Hamburg the repeater linking project in northern direction was switched over to digital ATV technology. The OM around Schneekopf mountain in the south preferred another method: video transfer via modified PC network expansion cards. This was similar to the Windows mediaplayer technology and showed first noticeable success.
(**www.atvlink.de**)



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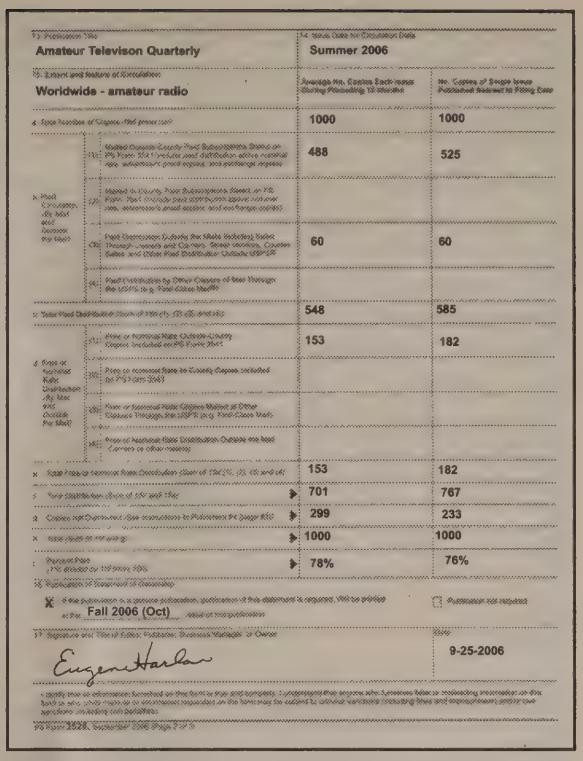
X None

X Has Not Changed During Preceding 12 Months

PS Form 3526, September 2006 (Page 1 of 3 (see instructions page 3))



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Worldwide - amateur radio	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
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	488	525
	60	60
	548	585
	153	182
	153	182
	701	767
	299	233
	1000	1000
	78%	76%

X If the publication is a general publication, publication of this statement is required. Will be printed in the Fall 2006 (Oct) issue of this publication. ☐ Publication not required.

Eugene Harlan — 9-25-2006

PS Form 3526, September 2006 (Page 2 of 3)

After some modifications to links and other devices in 2005 we were able to receive in solid digital ATV quality: DB0DTV-Mux (stream) from Hamburg-Rosengarten, DB0SAT from Hamburg-City, DB0OZ from Bremen, DB0EUF from Gatow near Lenzen/Elbe, DB0RHN camera, DB0TVI from Inselsberg, DB0HEX-Mux (stream with the 2 inputs and a link to DB0LHM) and DB0HEX info channel with Brocken test pattern and "HexenText". (By the way: Hexen is the german word for witches - there is a legend that they are dancing on the Brocken mountain each year before dawn of May 1st.)

In January 2006 a second remote controlled camera in Wernigerode (down in the valley) was linked to DB0HEX, and due to their temperature sensor reading inserted in the video signal it is interesting especially for meteorologists to compare both locations live.

In March 2005 unfortunately one of the link antennas fell down in spite of proper attachment, and the incident found a way into the regional newspapers. So we had to remove the two remaining antennas of the same kind that had been on duty for five years, and that we mechanically strengthened just recently. The concerned ATV links were lost, but we tried to replace the outside antennas by new ones inside the GFK shell of the commercial tower. Sorrily reflections and absorption of this material were too high in our frequency range between 2.4 and 10 GHz.

On May 22nd 2006 an ultimatum by the landlord (DFMG) ordered to shut down and remove the entire amateur installation, after negotiations between him and the amateur radio organization of telecom employees (VFDB) were unsuccessful. In spite of all our efforts to correspond to the commercial safety standards which was attested in writing by the regional DFMG agent, everything on the site (including cables) had to be removed: Packet Radio digipeater DB0BRO (active for 16 years) with 10 links, user port, APRS digi and PocSag (amateur SMS) transmitter, the ATV repeater DB0HEX and the 10 GHz CW beacon.

Iwo Schulz, DG0CBP

update:
After an enormous effort the ATV repeater DB0HEX is on air again after 5 weeks downtime. It has a new location with all needed authorizations. In a new 19 inch rack the existing devices like DATV-TX and Mux-control have been installed, but also some adaptations were needed which demanded much time and real money. On this new location we will have to test different antenna constellations. At first we have activated the DATV output on 23 cm and both inputs on 13 and 3 cm. The next task will be the link to DB0EUF (and Hamburg), but also both camera links have to be stabilized.

DB0HEX repeater crew
www.db0hex.de

ATVQ TO PAY FOR ARTICLES!

Payment for Technical Articles

ATVQ will pay for certain articles that it publishes. I will outline the policy here, but it will be subject to change as needed to make sure that ATVQ continues to be an ongoing publication. ATVQ will pay $25.00 for technical articles that are published and are a minimum of 2 pages. While this is not a great amount, I hope it will encourage more technical type articles to be written. Exceptions will be articles that are written by a manufacturer/seller of equipment that is being written about. While I do not want to discourage this type of article, the article itself is an advertisement of the product. Articles from clubs will be encouraged, and I would expect they would like to share their information with the ATVQ readership. Information gathered from the Internet will not be paid for and is mostly small filler items.

Ideas

Do you have an idea for an article that you've said to yourself that you wanted to write, but never did. Feel free to check with us to see if it is of interest, or write and send it in. No guarantees that it will get published, but if you don't try, you will never know. I'll be looking to see what you can do!

CONTRIBUTORS GUIDE

Preferred method of receiving articles is from **Microsoft Word**, however **Wordperfect** is OK too. Next preference would be **ASKII text**, followed by **typewritten** or **hand written** (clearly). Diagrams or pictures (B&W or Color) can be sent in hard copy, or if you scan them in, save to PCX or JPG formats (actually I can read about anything). If you send a computer disk, make sure it is PC (not MAC) format.

When sending in articles in Microsoft Word, please SAVE with FASTSAVE OFF and save in Word 6 format. Also, articles written in any word processor, consider what will happen when it is re-formatted to fit the style that I might put it in. An example would be setting up tables or adding figures into the article. They can be very hard to strip out. If possible, put the tables, figures, each in a file by itself. This will help me to be able to import into the magazine format.

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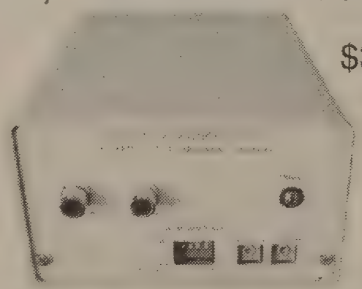

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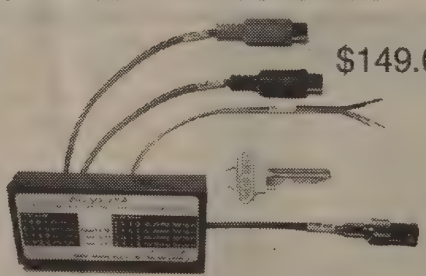

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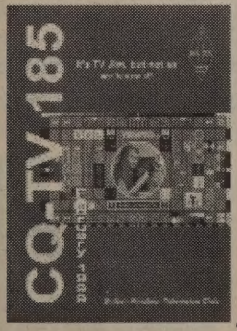

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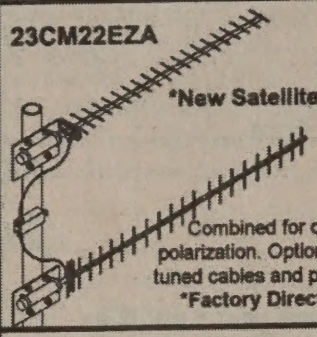

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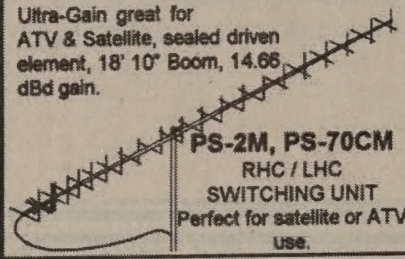

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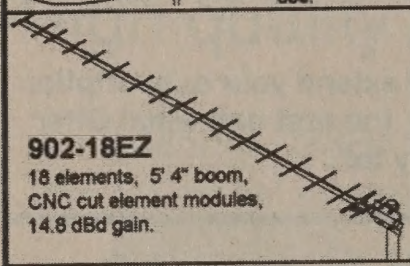

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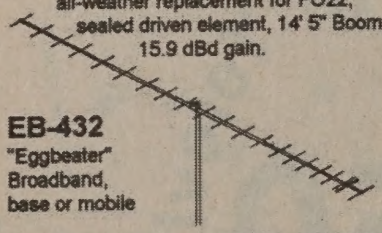

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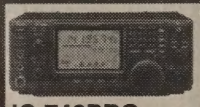

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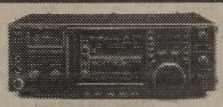

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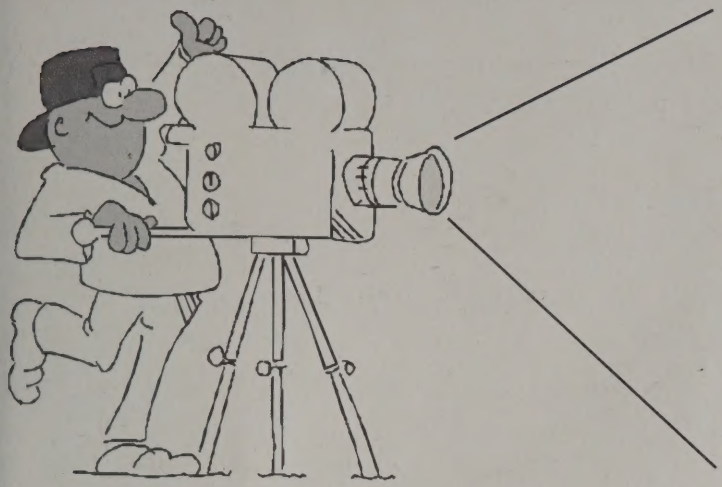

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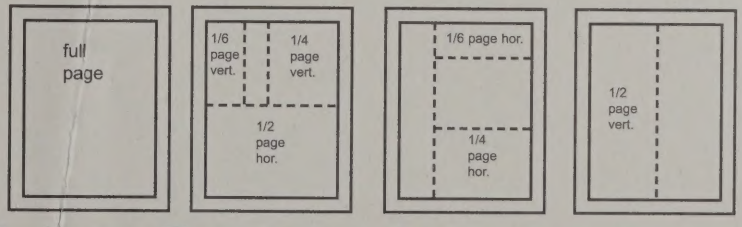
1/4 PAGE	3 1/2"	5"	5"	3 1/2"
1/6 PAGE	2 1/4"	5"	5"	2 1/4"



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